

Vertical Consistency

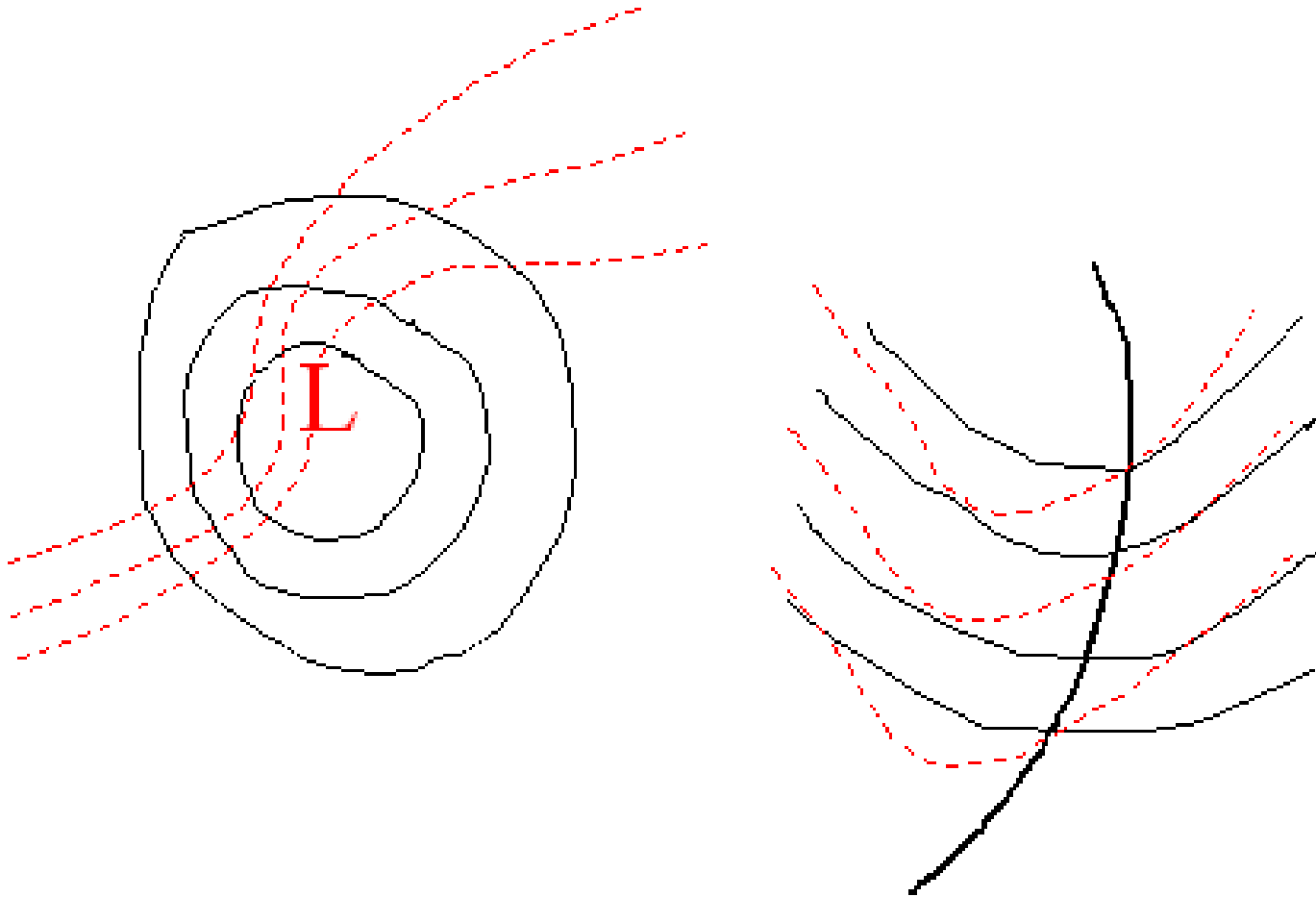
Module 3

Module 3 – Vertical Consistency

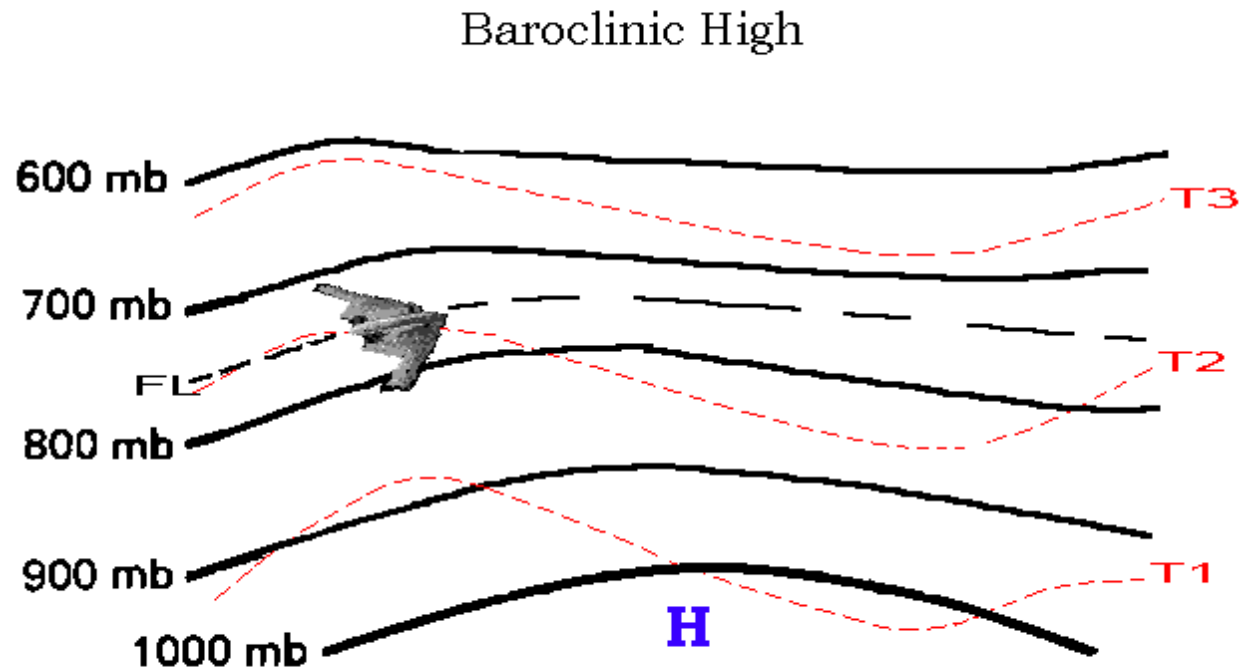
Objective 1: Identify the pressure system either as barotropic or baroclinic and the name of the system (cold core high, etc.) to the satisfaction of the evaluator as indicated by a Go/No Go checklist.

Objective 2: Stack fronts, lows, and highs on a reanalyzed product to the satisfaction of the evaluator as indicated by a Go/No Go checklist.

Baroclinic Systems

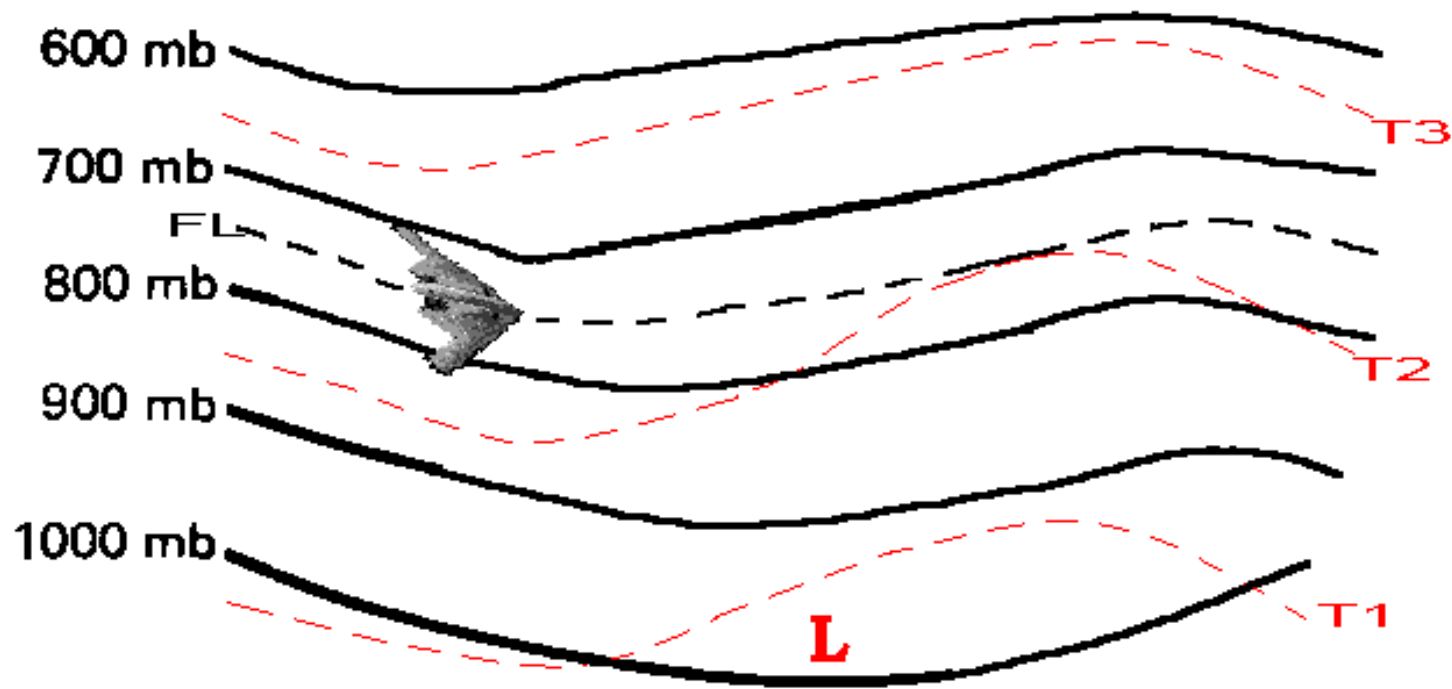


Baroclinic High

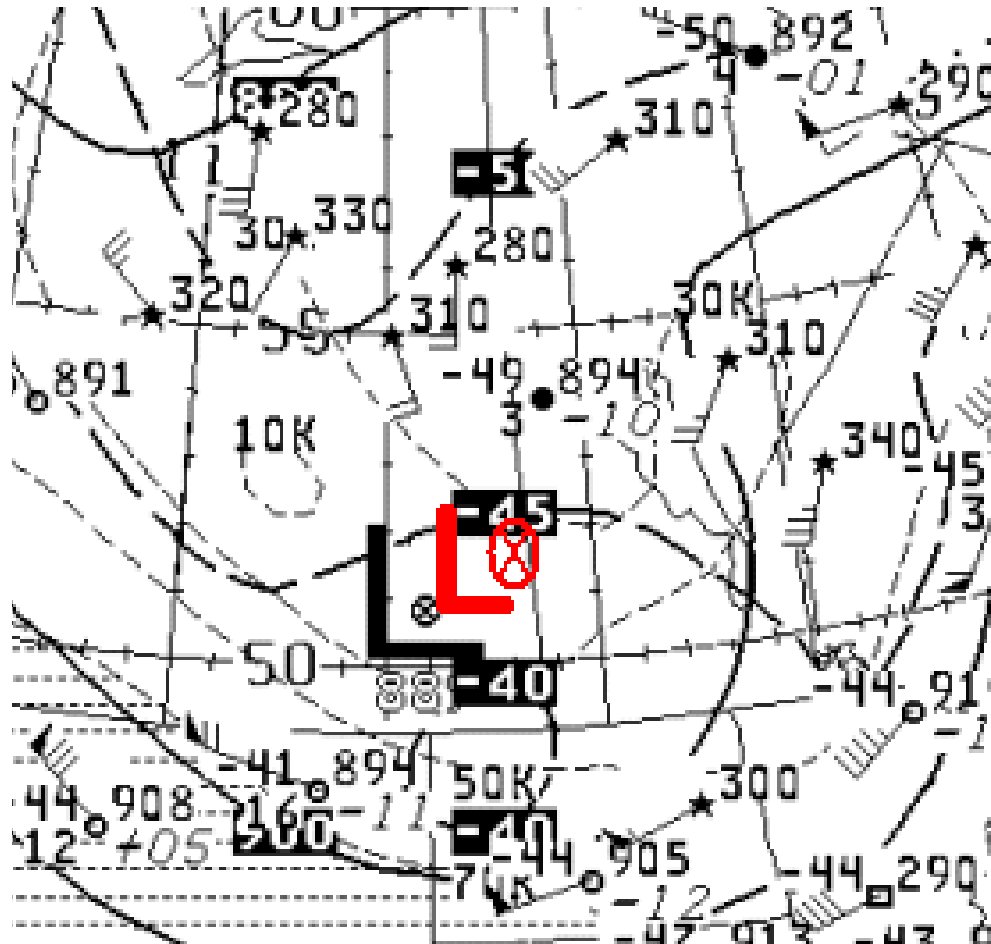


Baroclinic Low

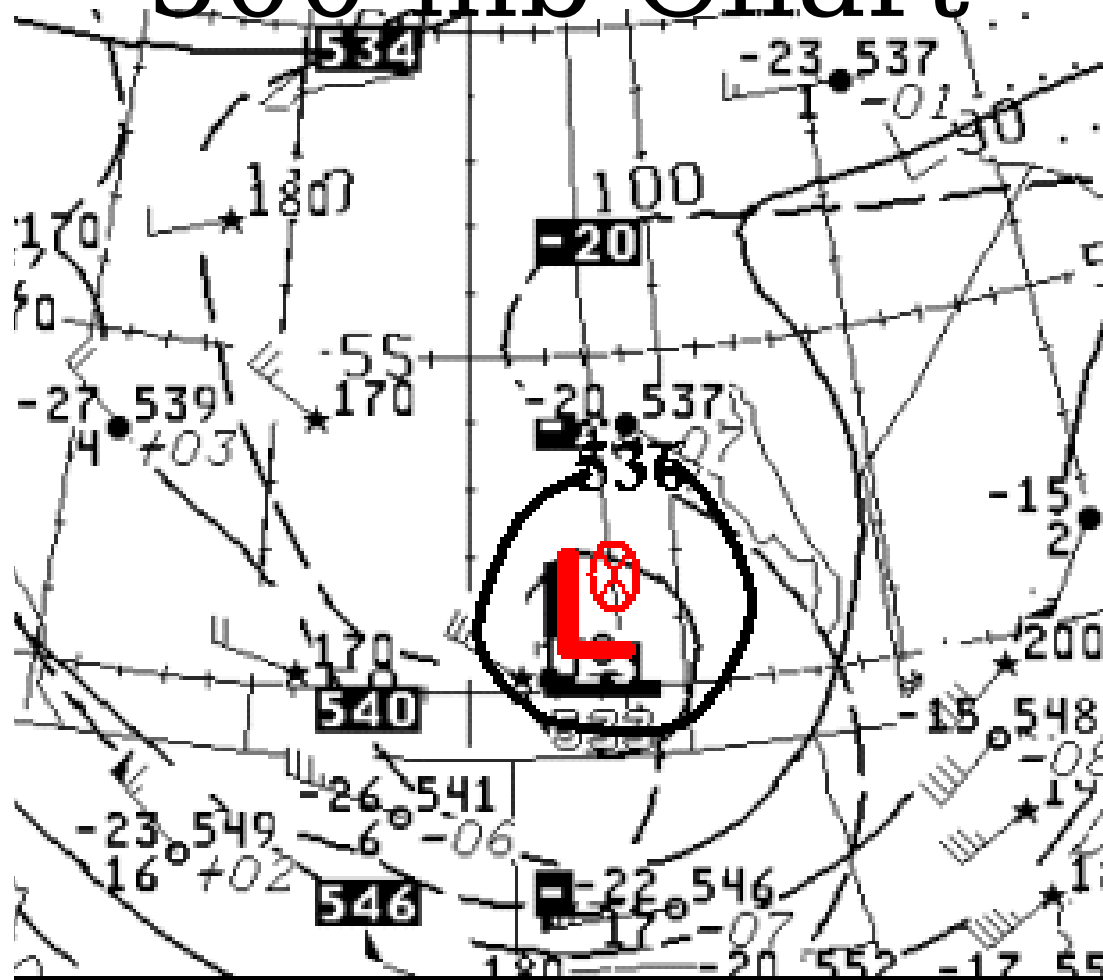
Baroclinic Low



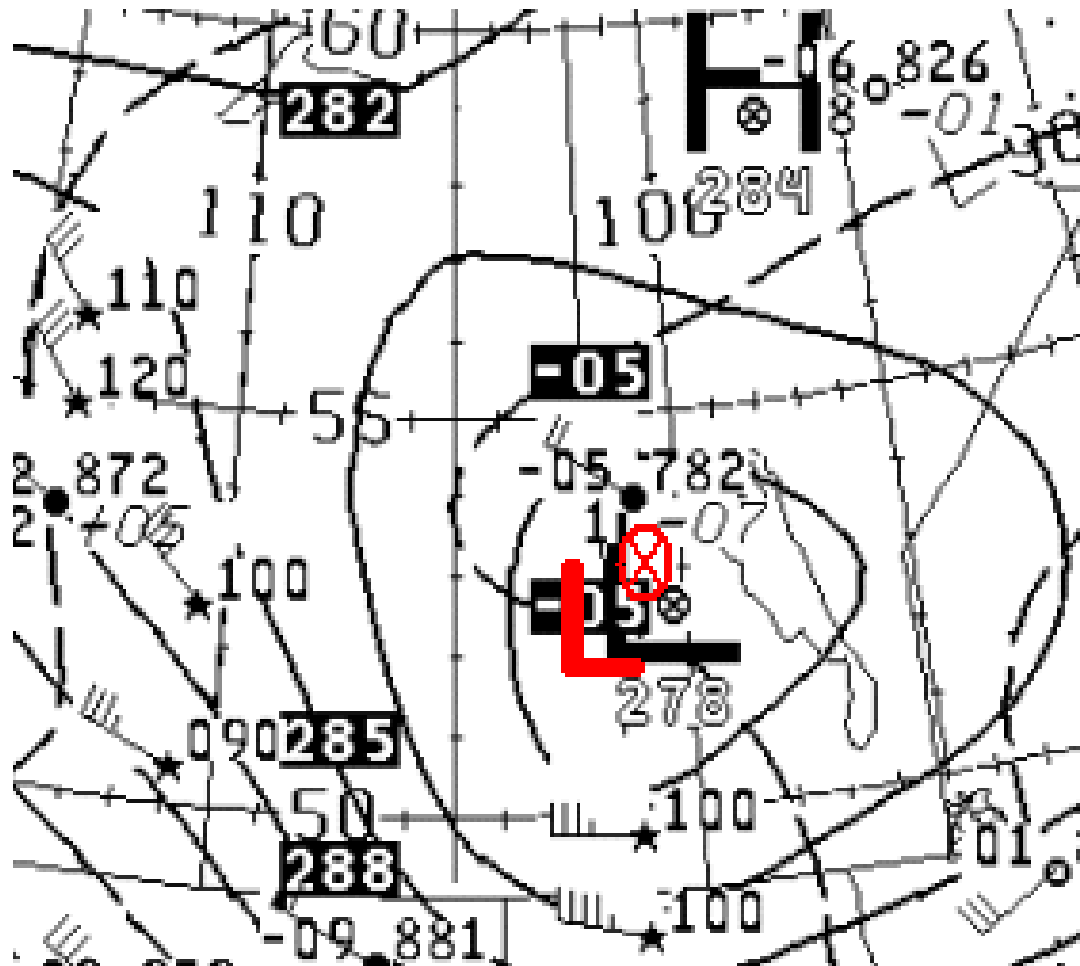
300 mb Chart



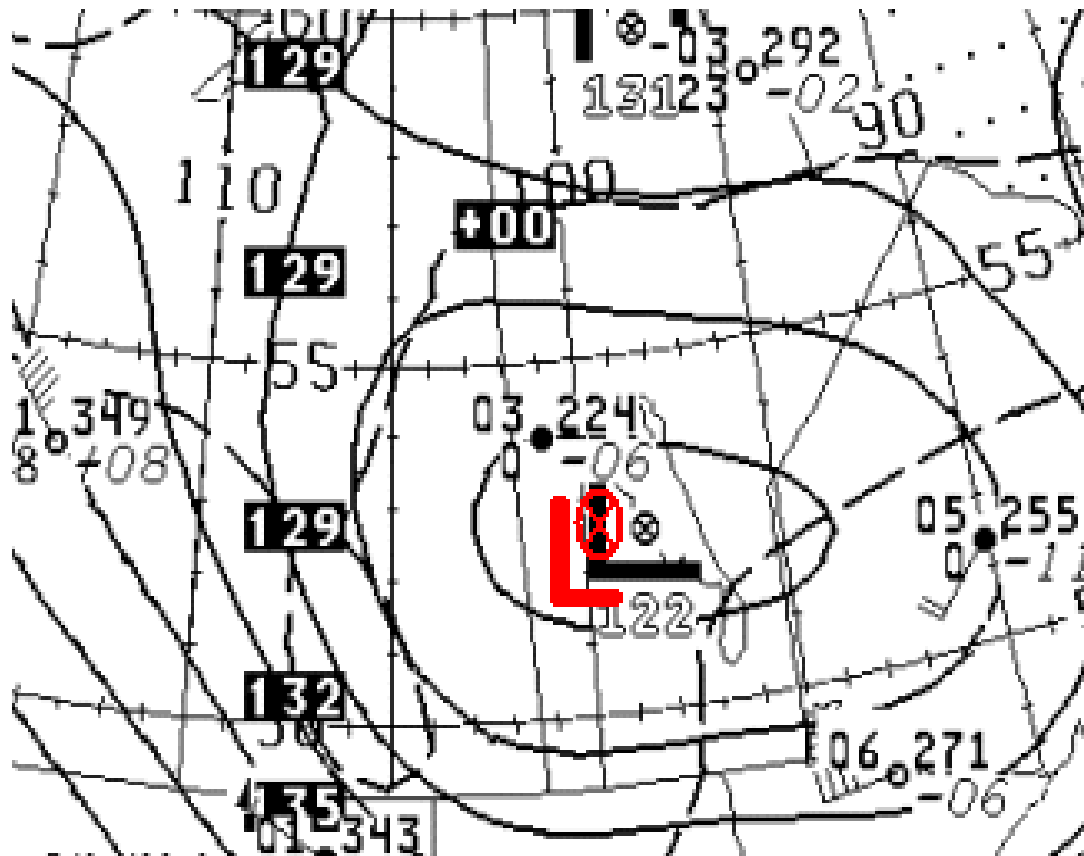
500 mb Chart



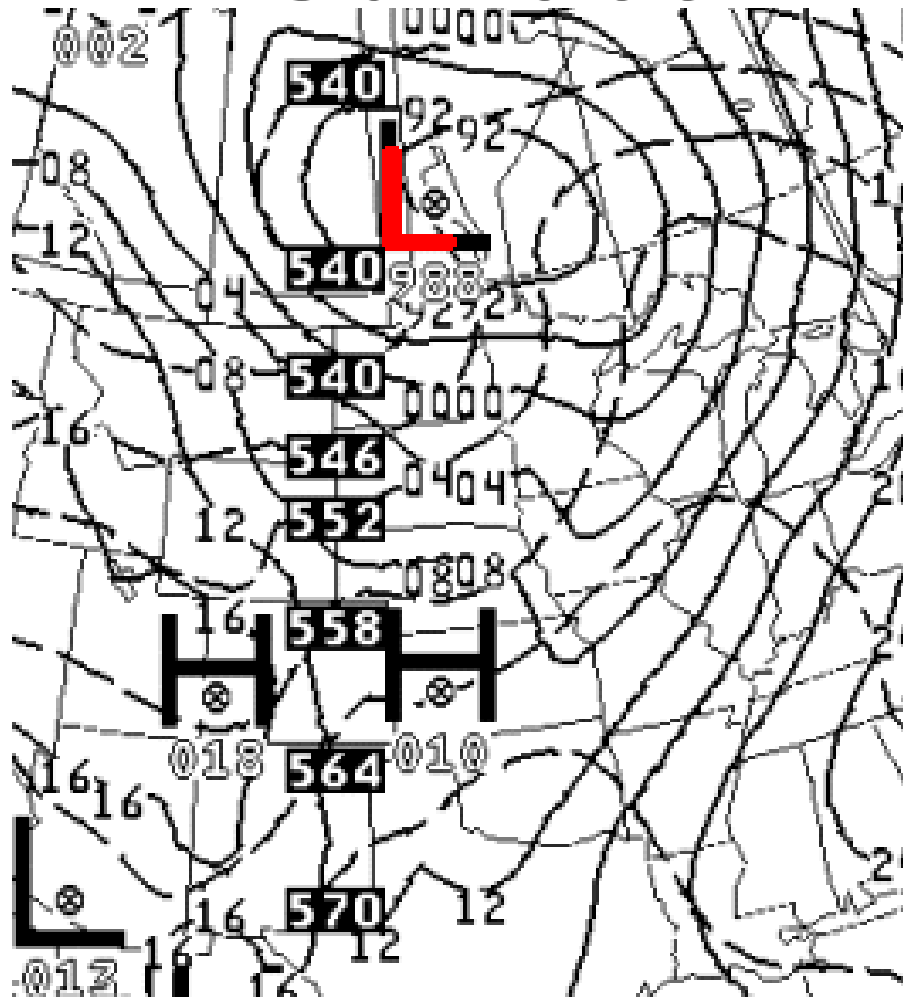
700mb Chart



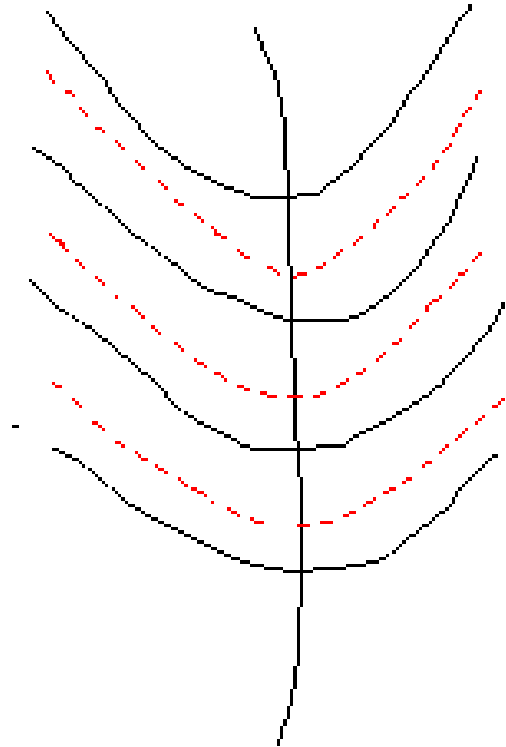
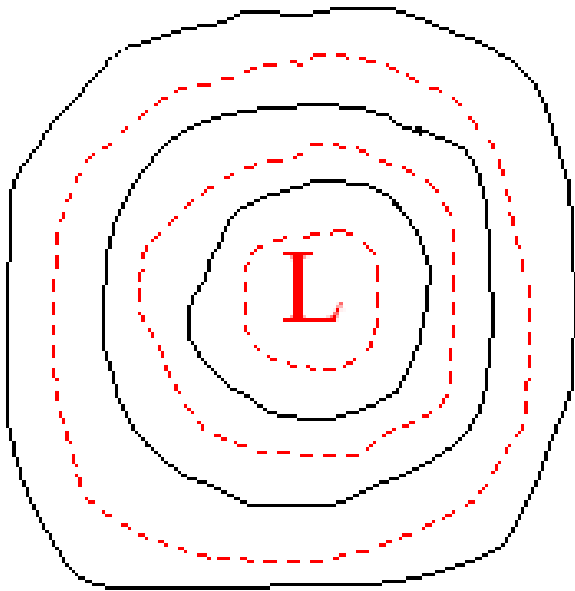
850 mb Chart



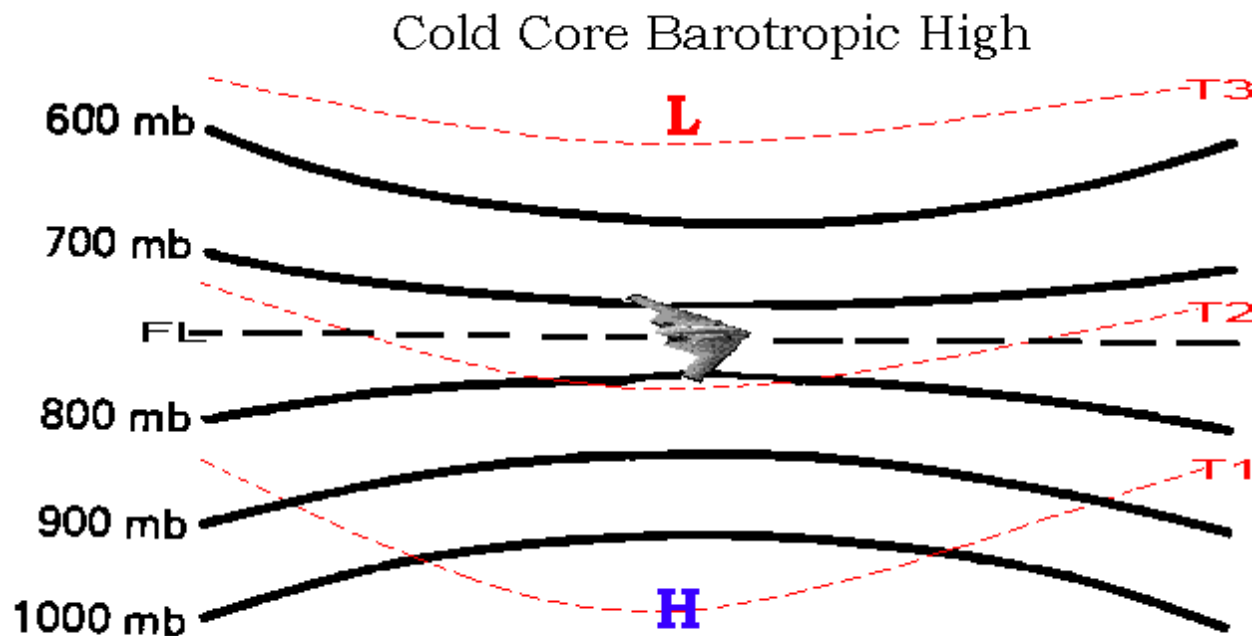
Surface



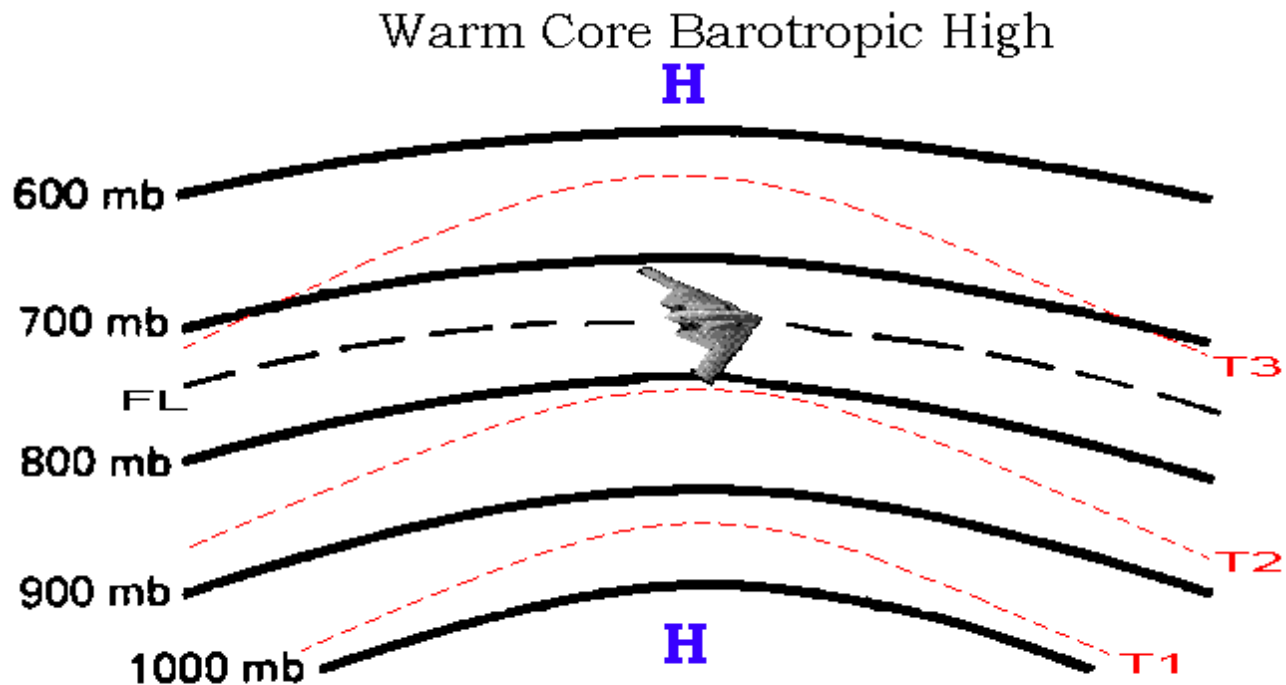
Barotropic Systems



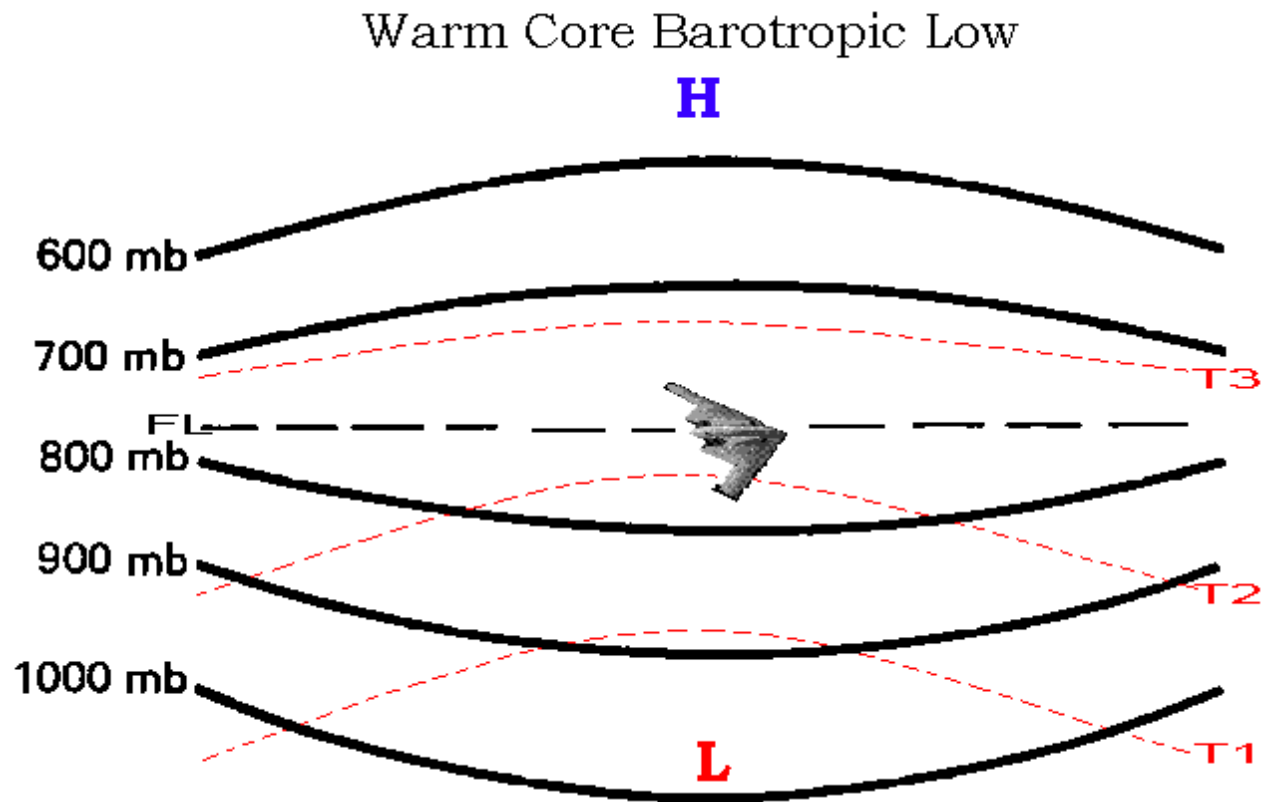
Cold Core Barotropic High



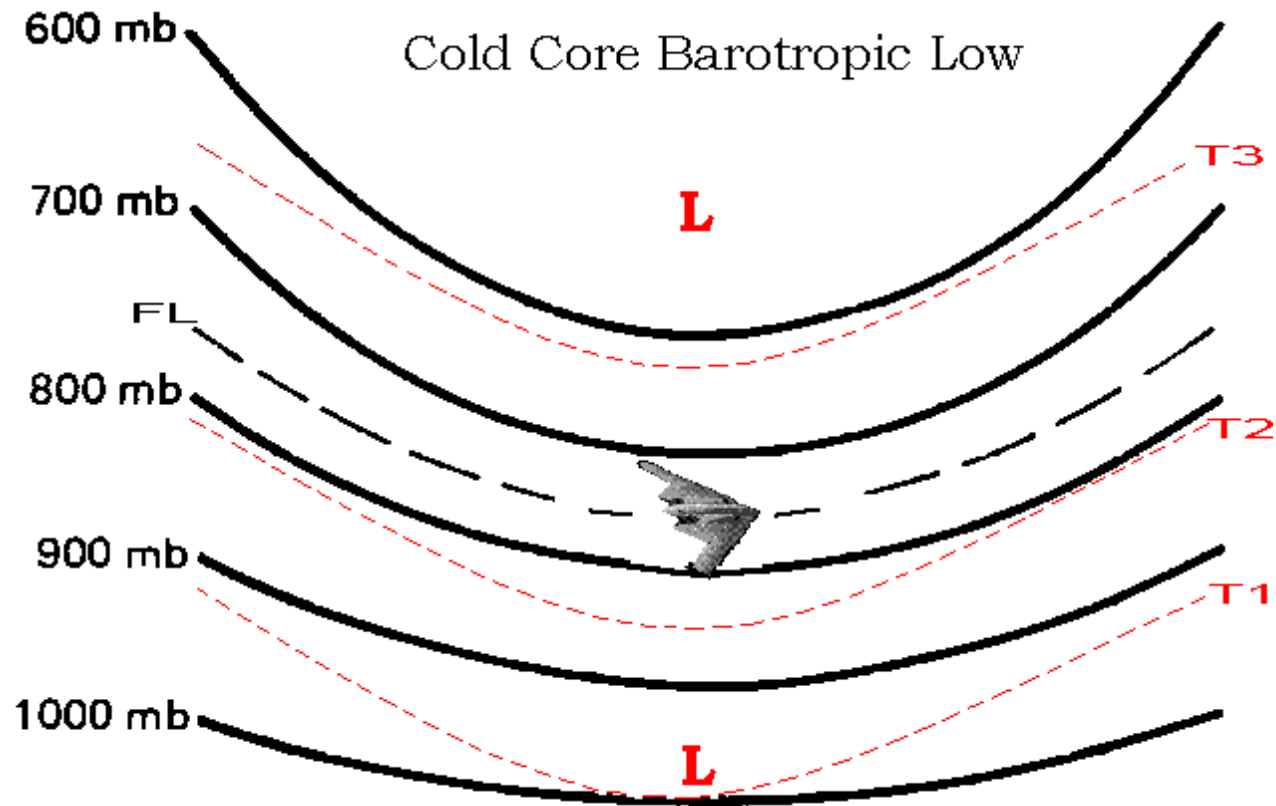
Warm Core Barotropic High



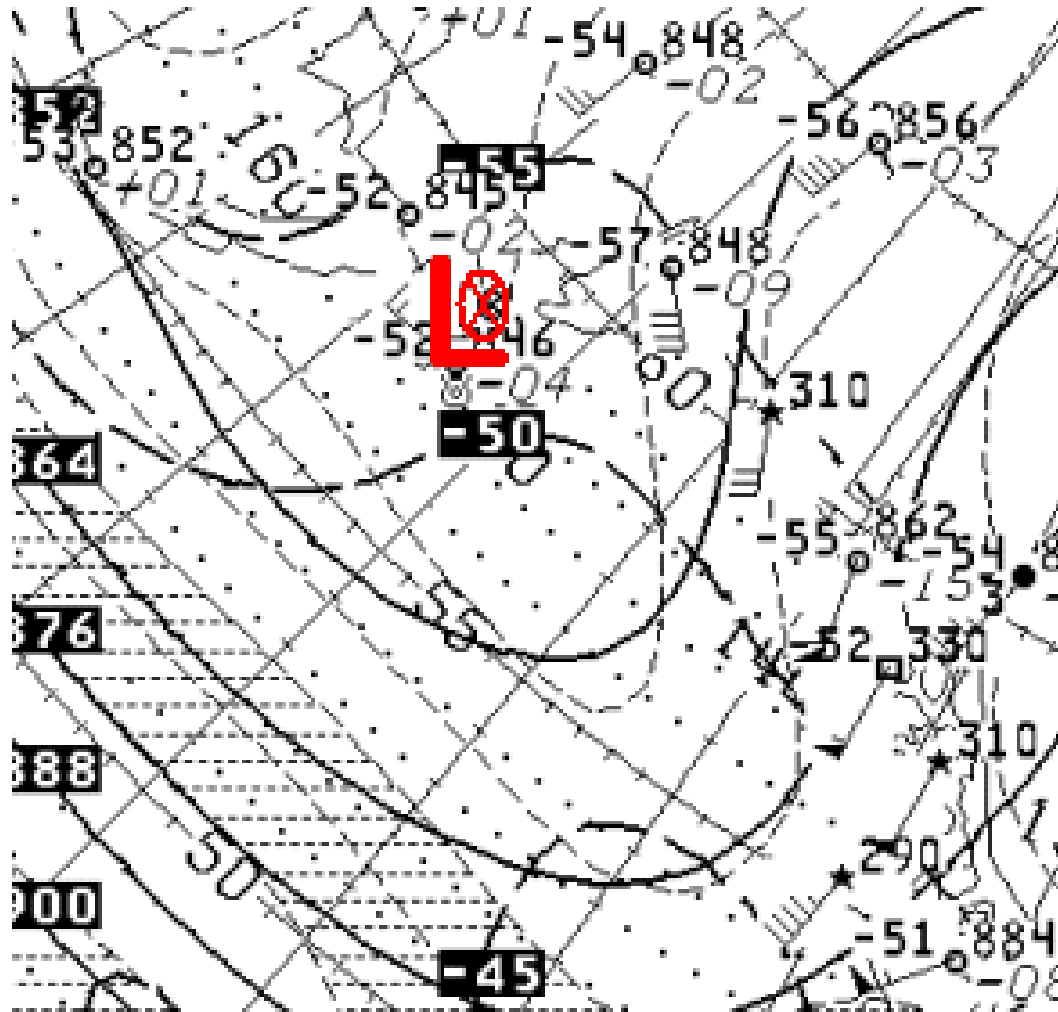
Warm Core Barotropic Low



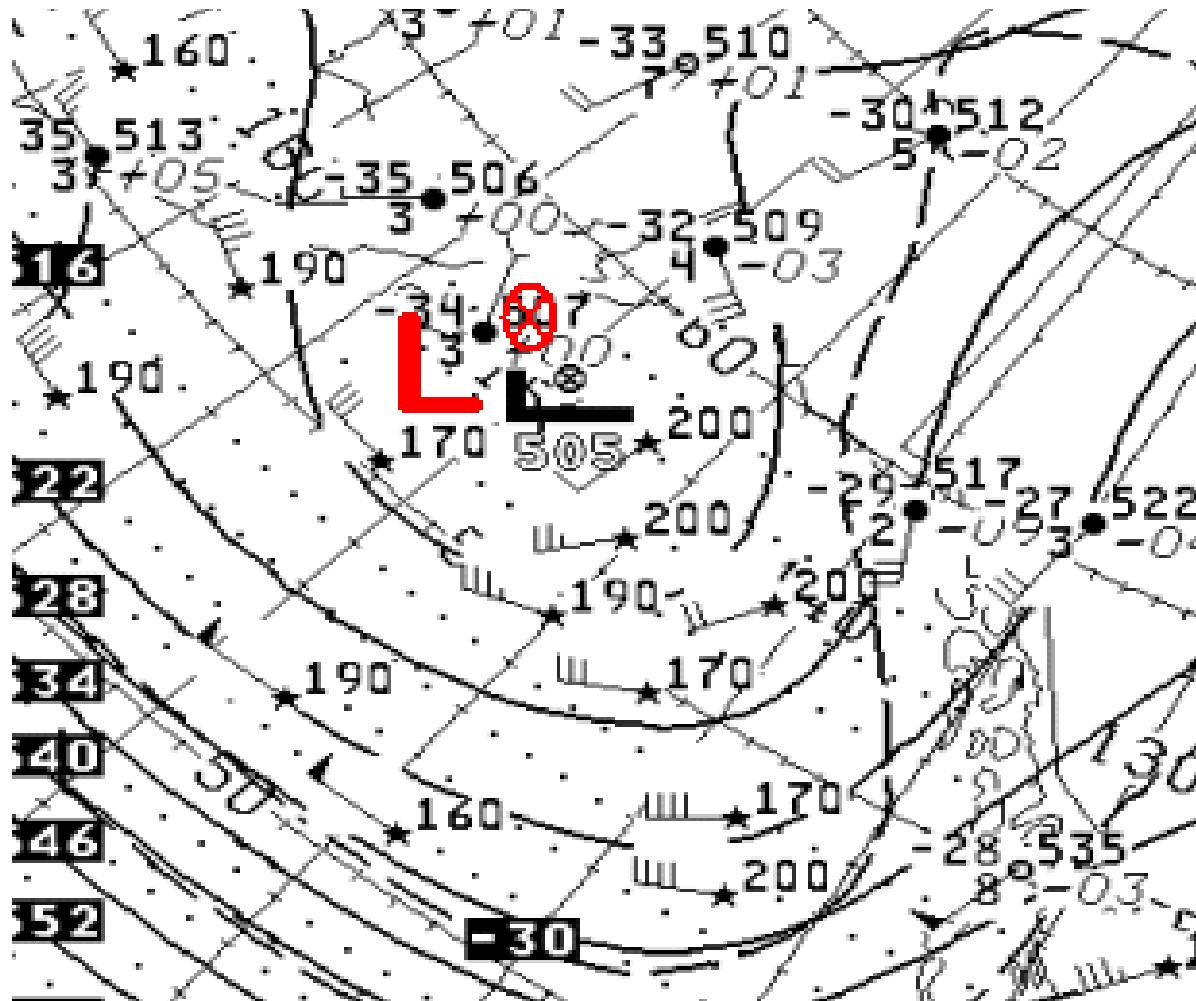
Cold Core Barotropic Low



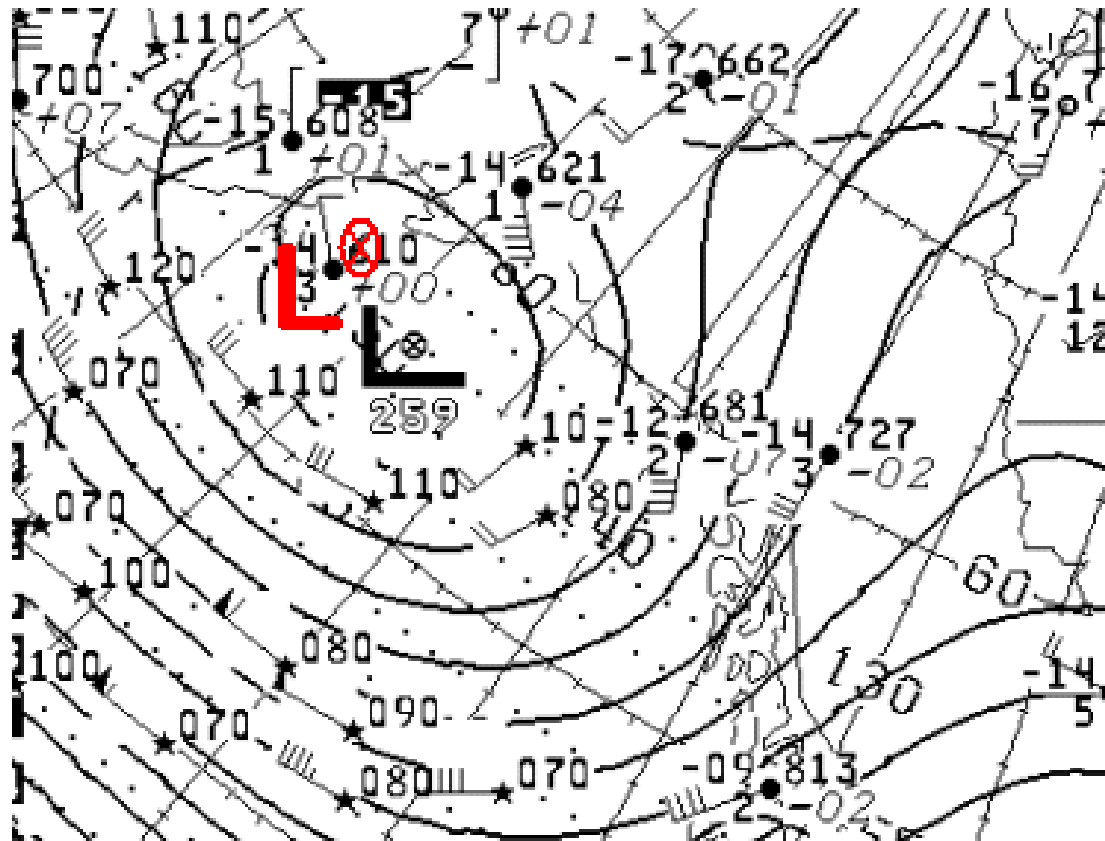
300 mb Chart



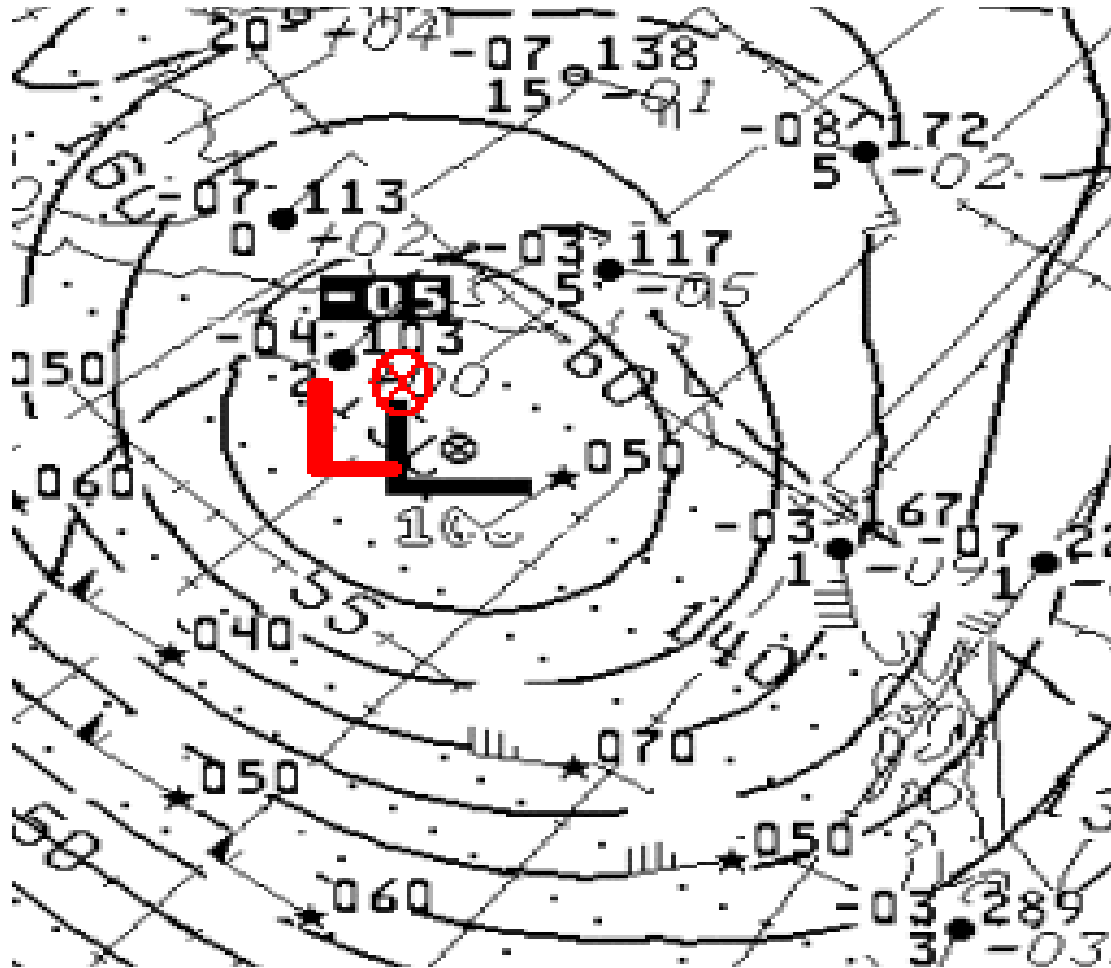
500 mb Chart



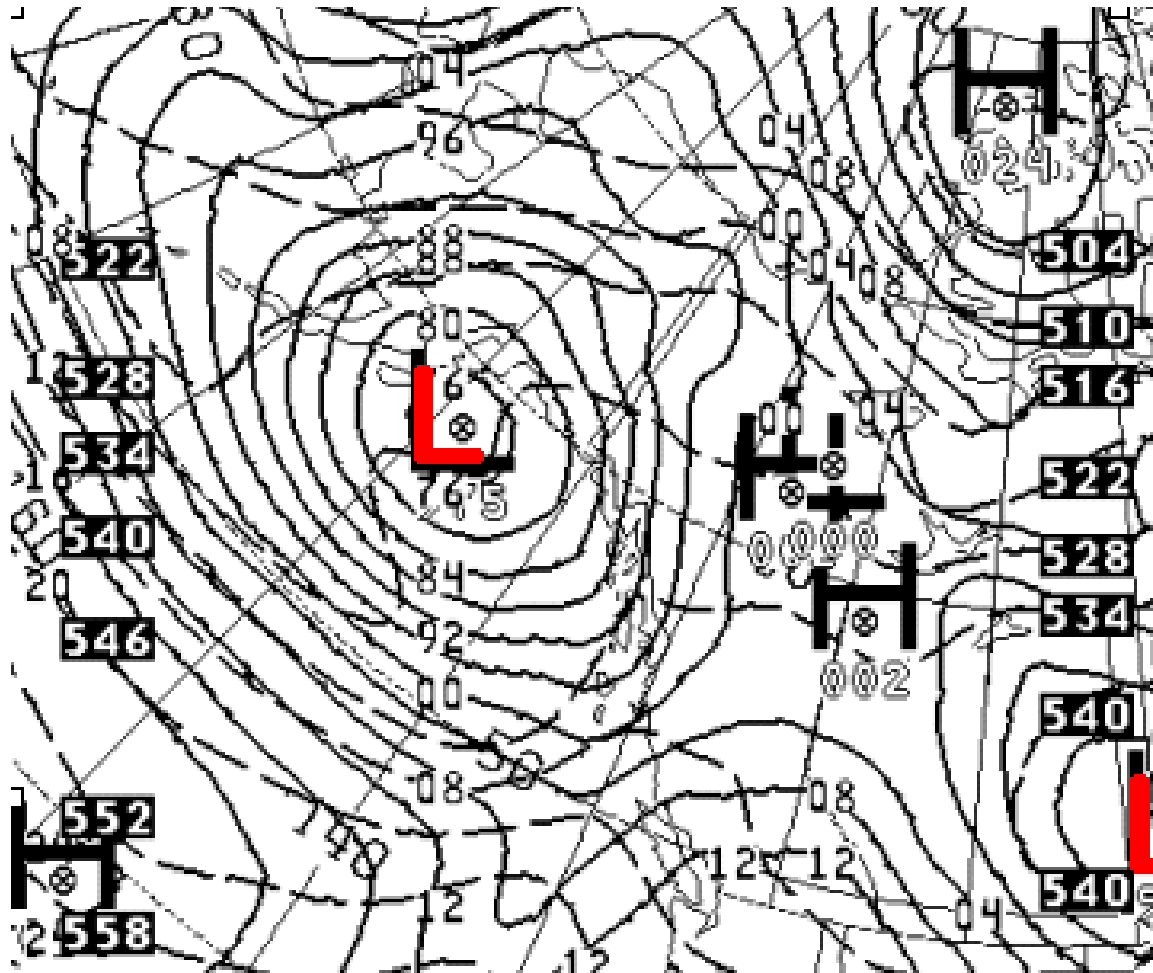
700 mb Chart



850 mb Chart



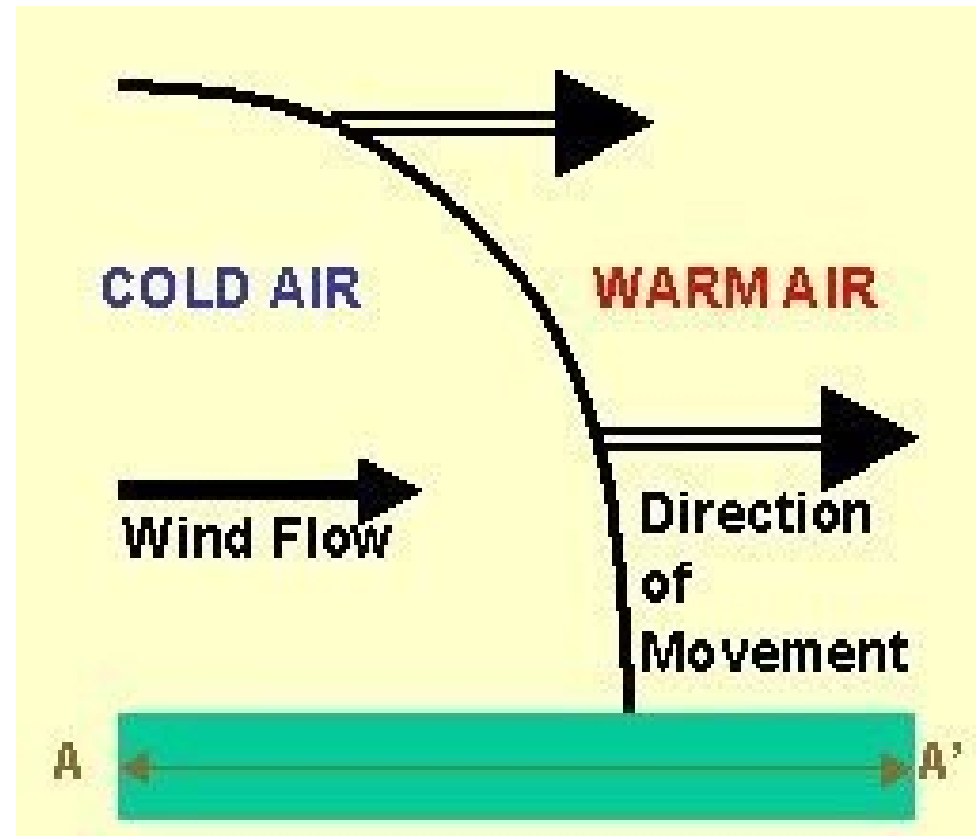
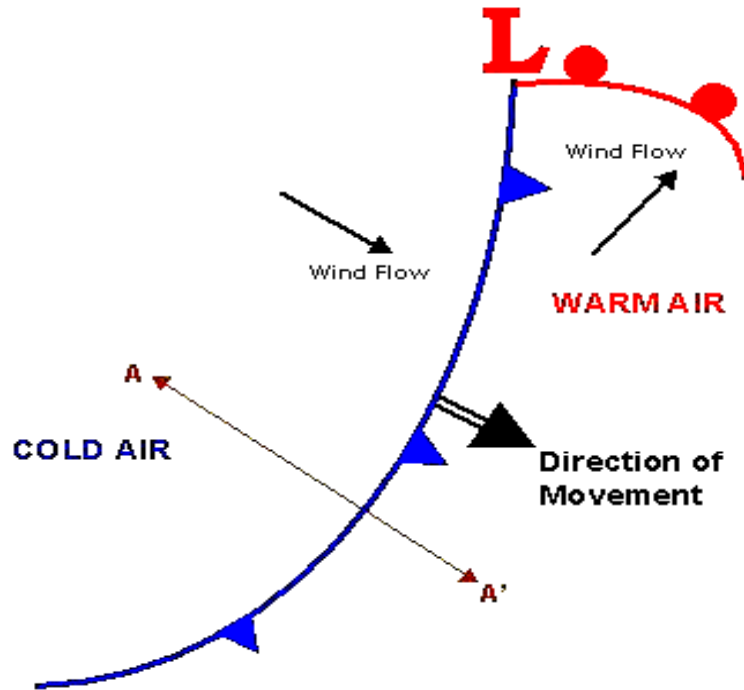
Surface Chart



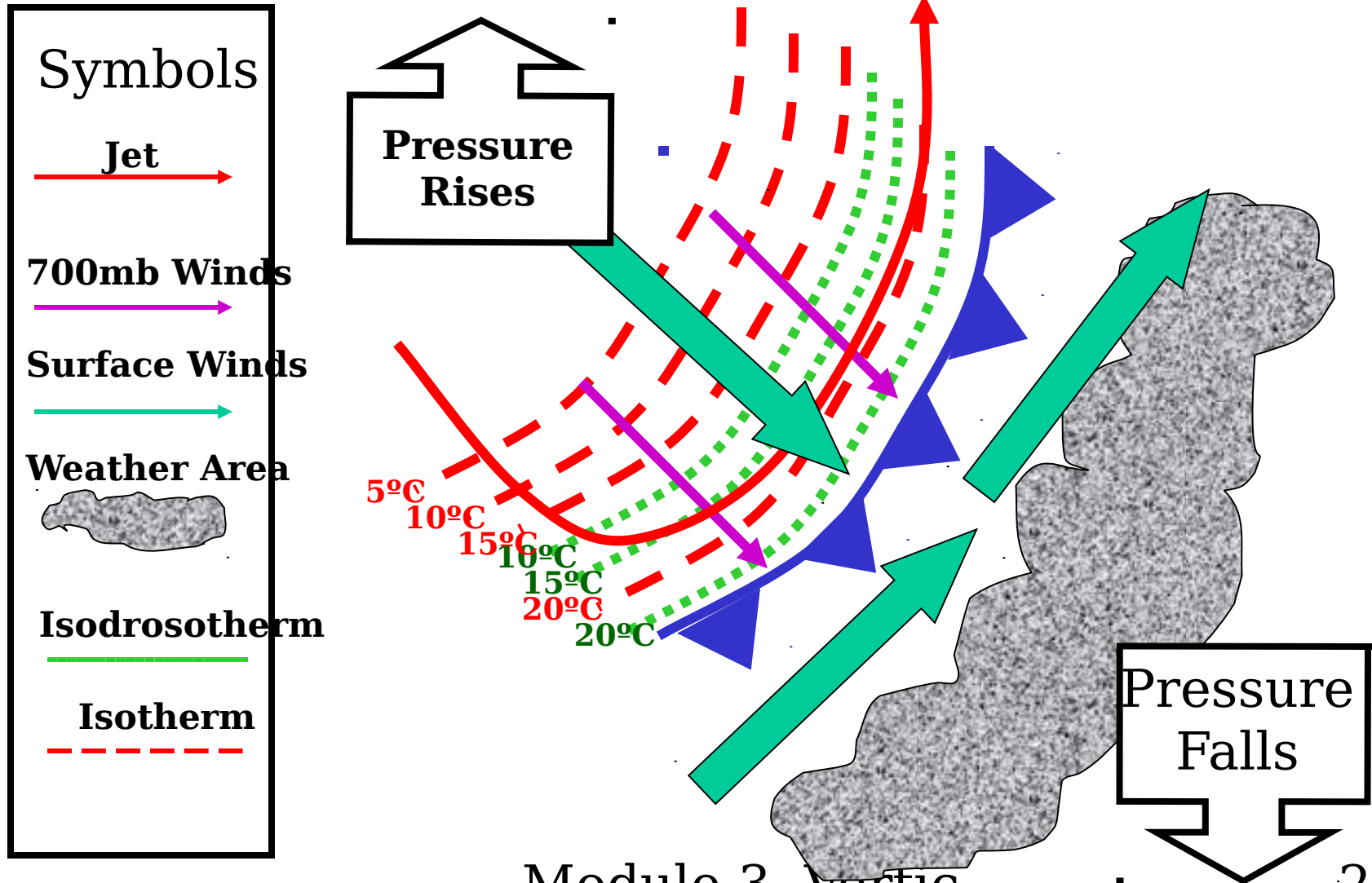
Cold Fronts (General Rules)

- Normally temperatures drop after passage
- Dew point drop after passage
- Pressure falls ahead of the front due to divergence aloft
- Pressure rises behind the front due to the CAA
- Winds veer in the horizontal and back in the vertical

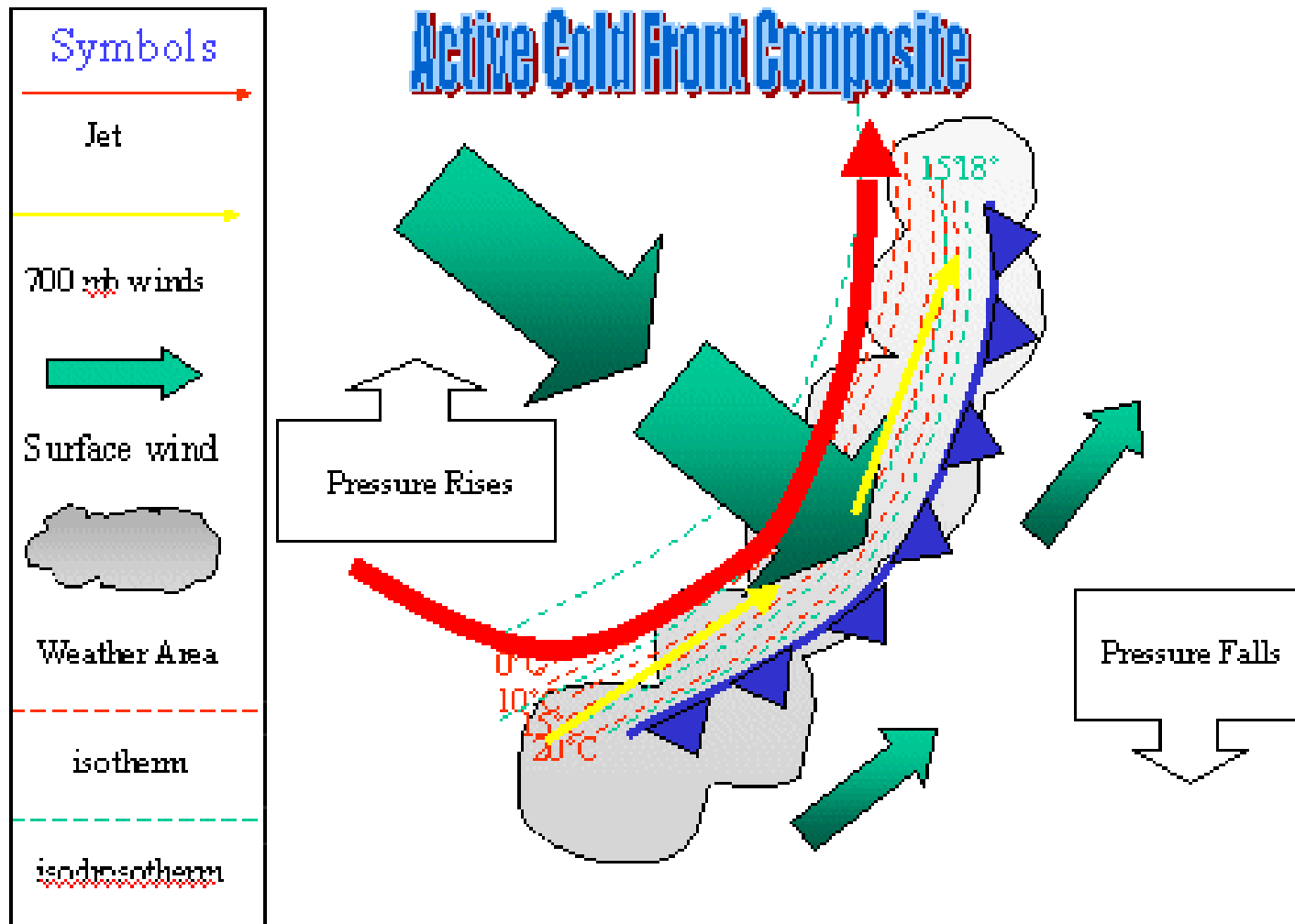
Vertical and Horizontal Depiction of Cold Fronts



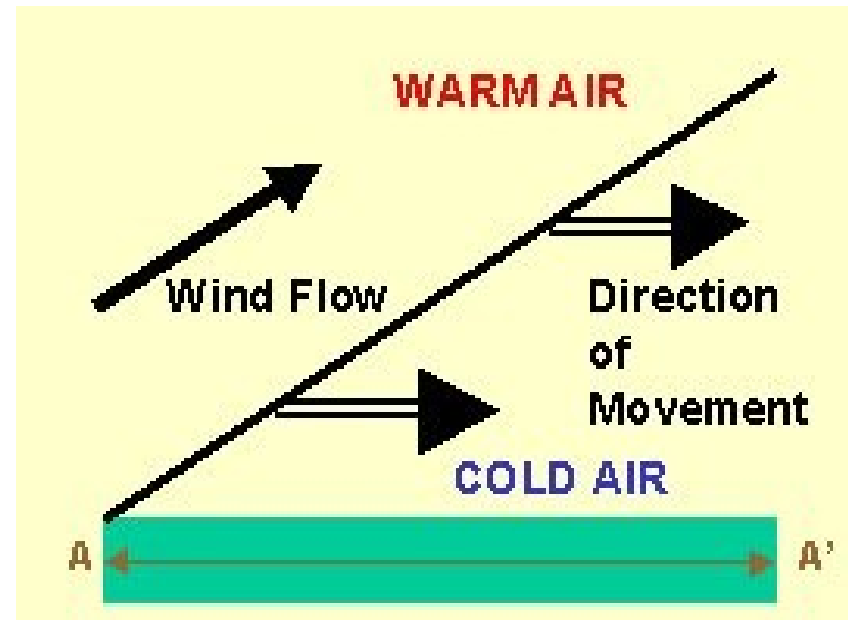
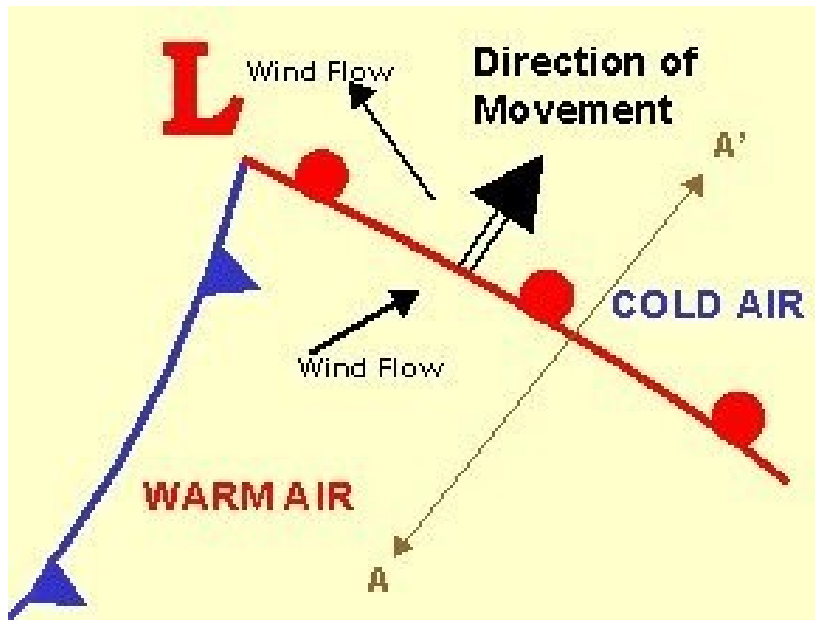
Inactive Cold Fronts



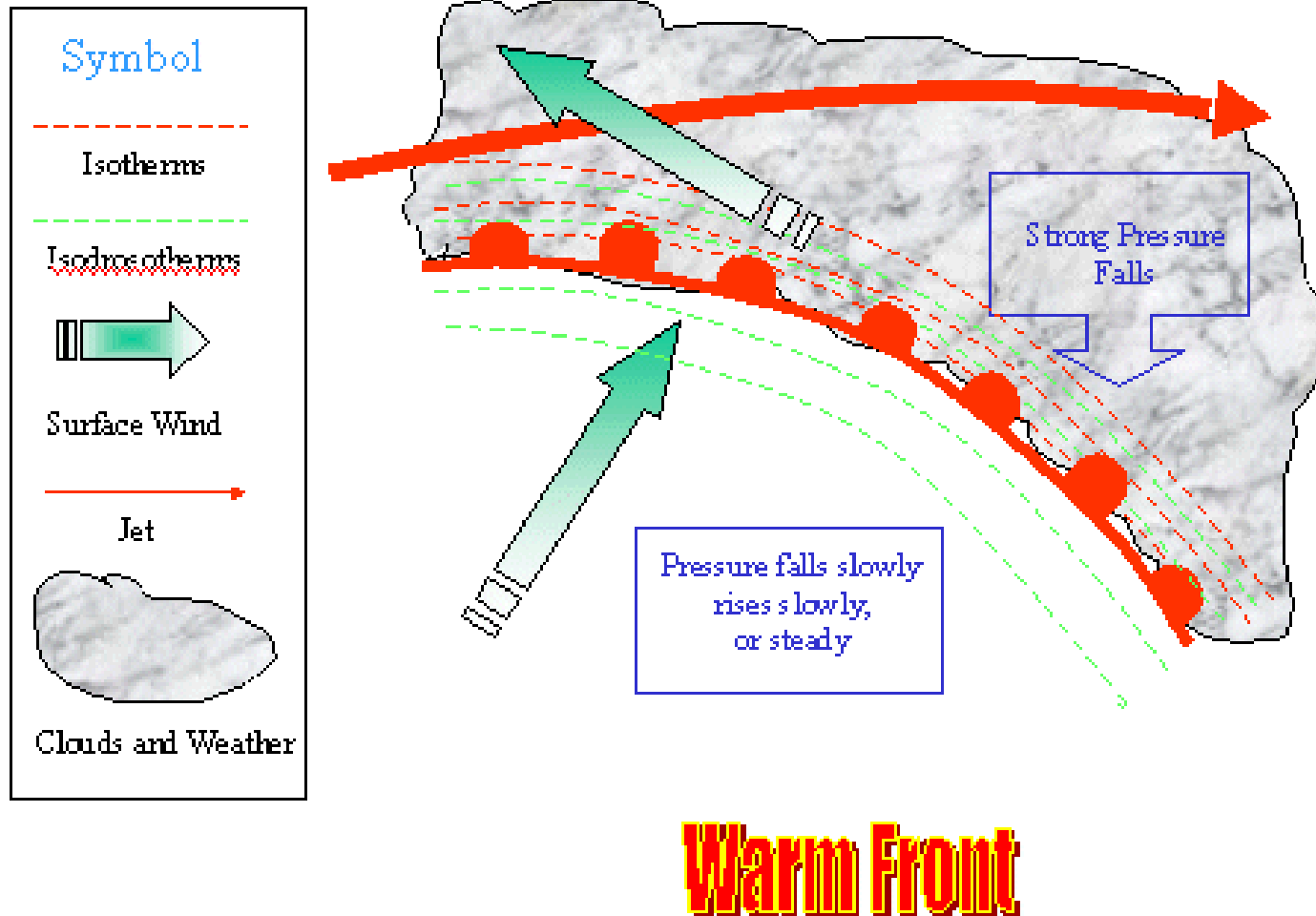
Active Cold Fronts



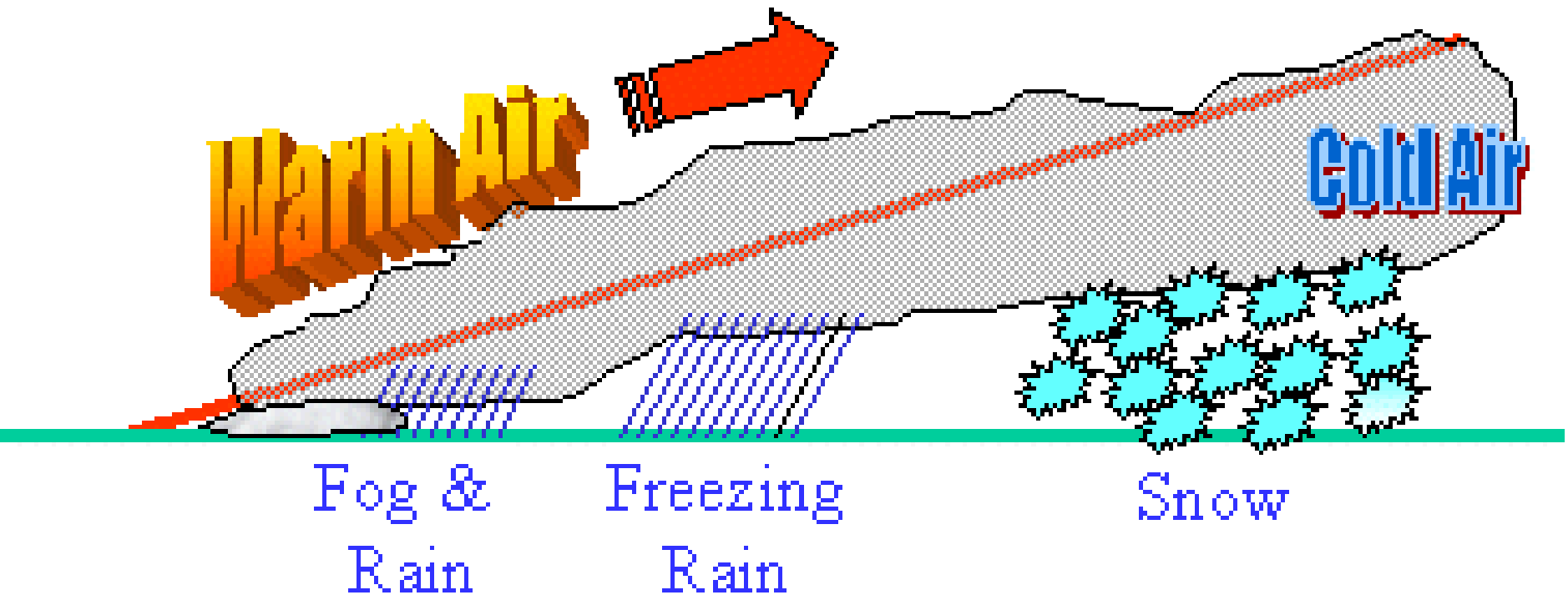
Vertical and Horizontal Depiction of Warm Fronts



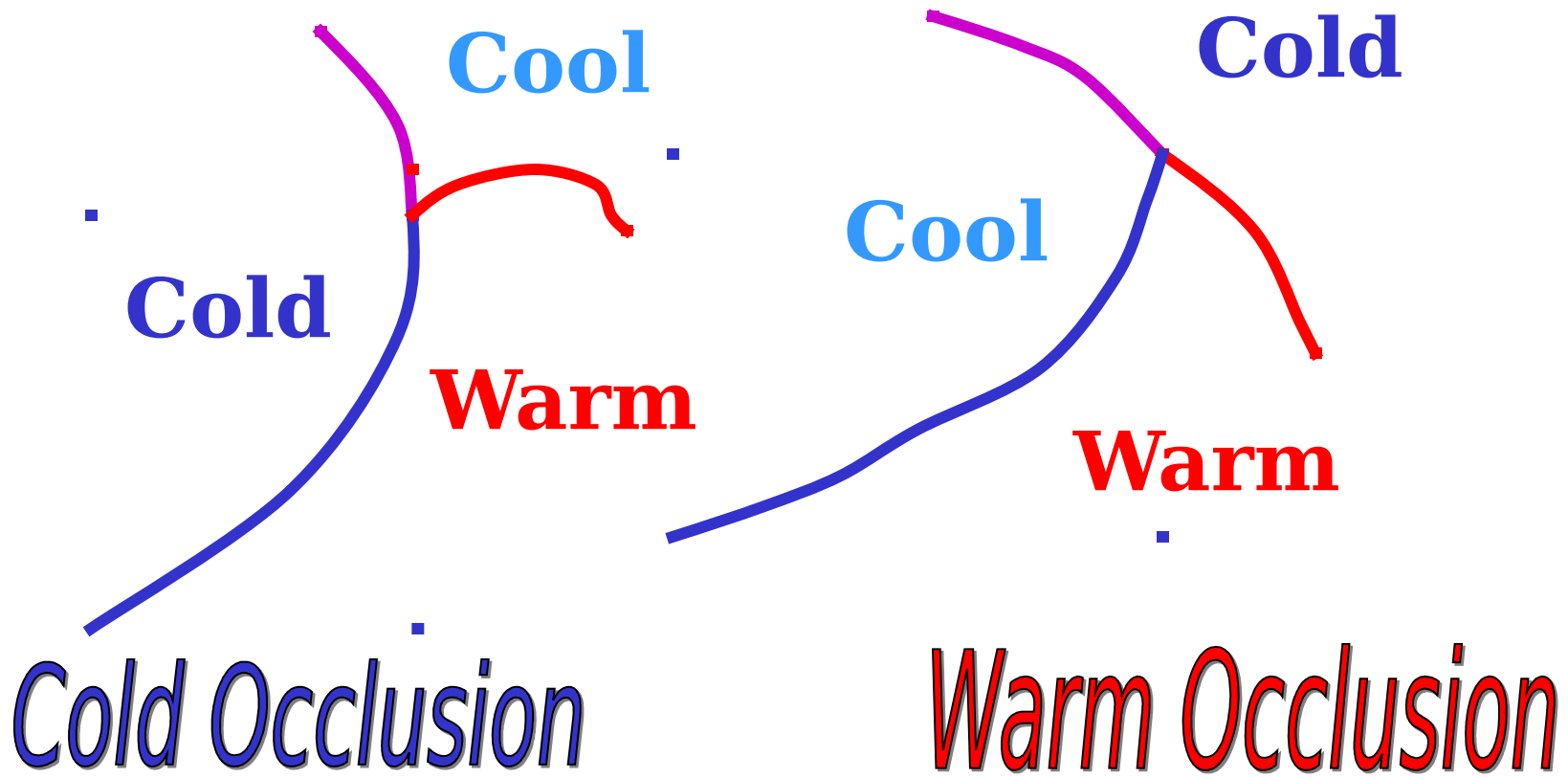
Warm Fronts



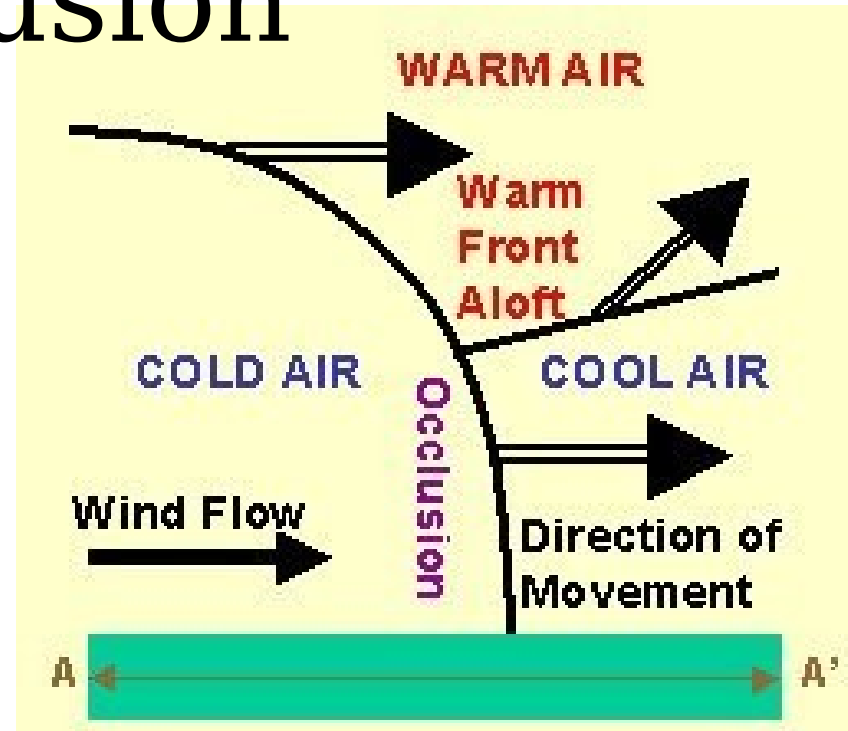
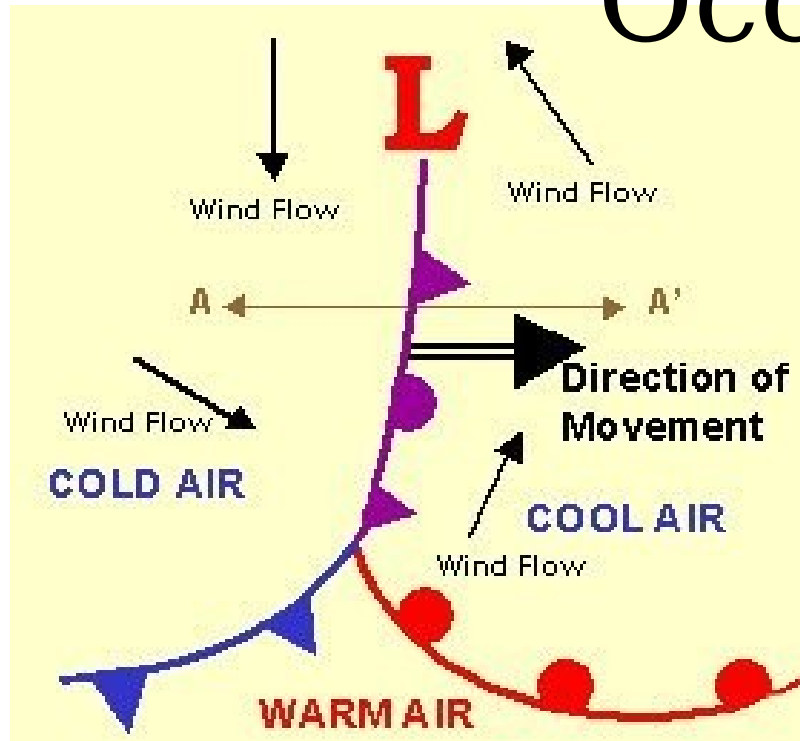
Classic Warm Front Scenario



Occlusions



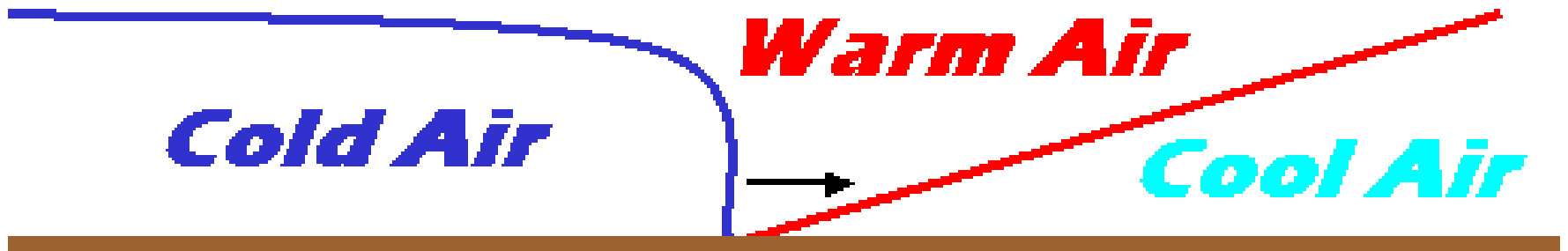
Vertical and Horizontal Depiction of Cold Occlusion



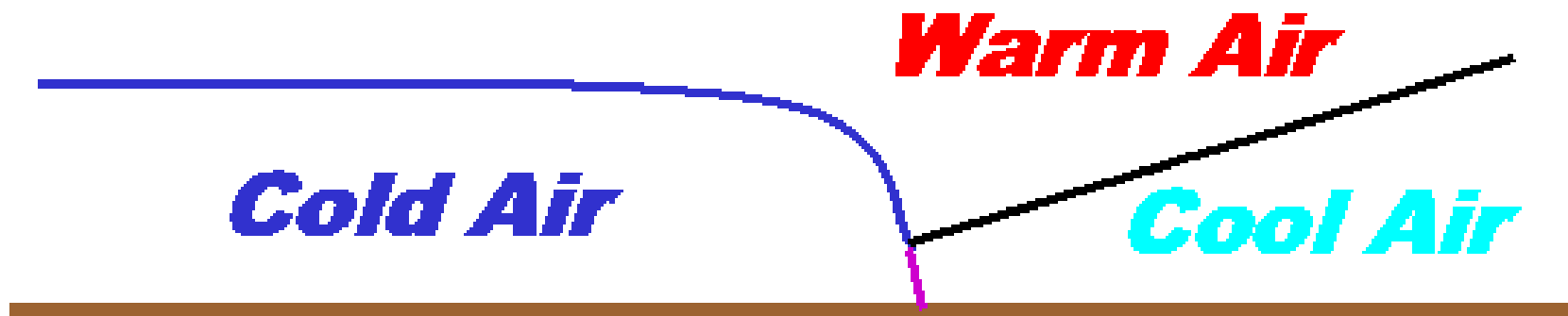
Cold Occlusion



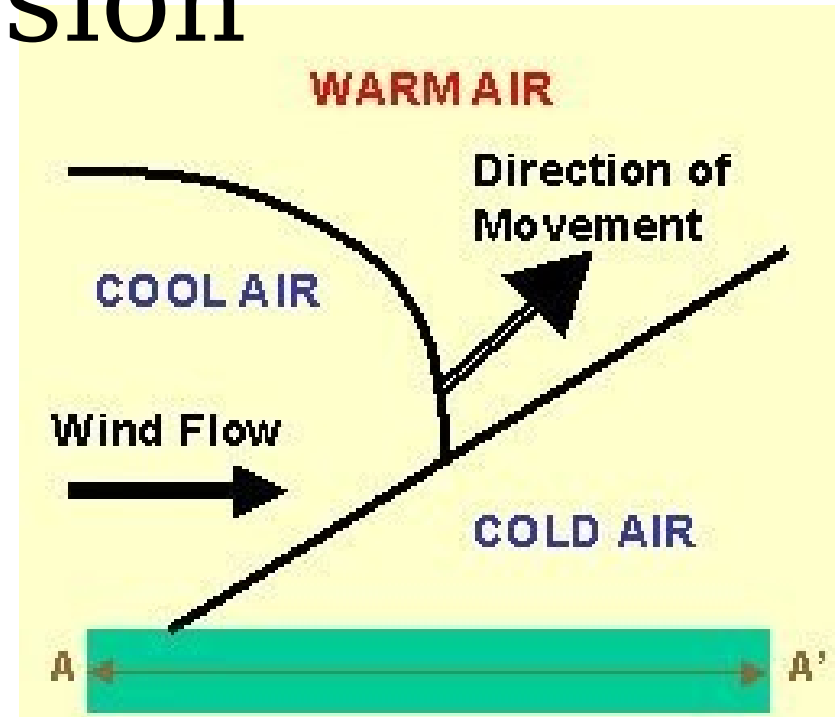
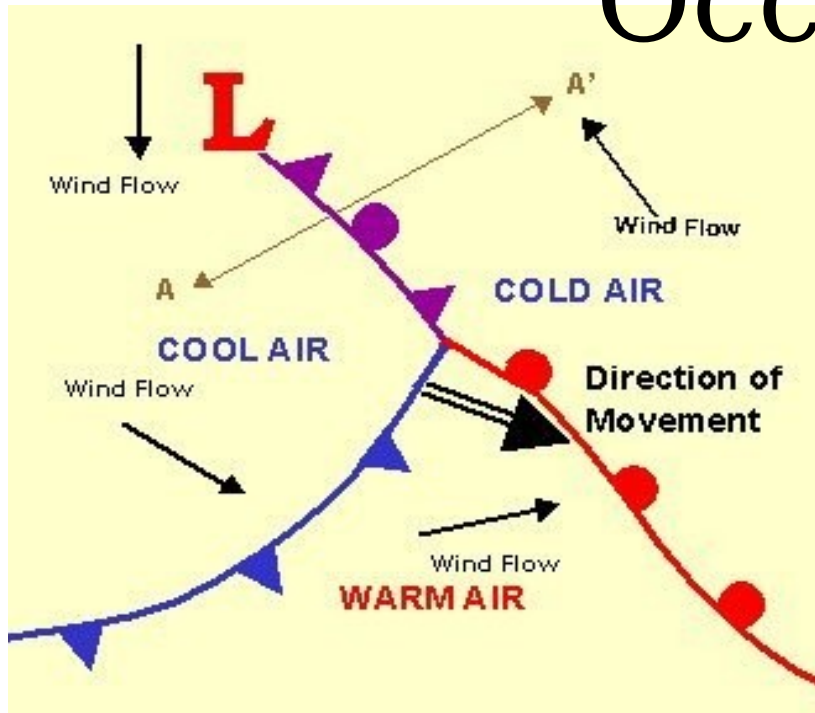
Cold Occlusion



Cold Occlusion



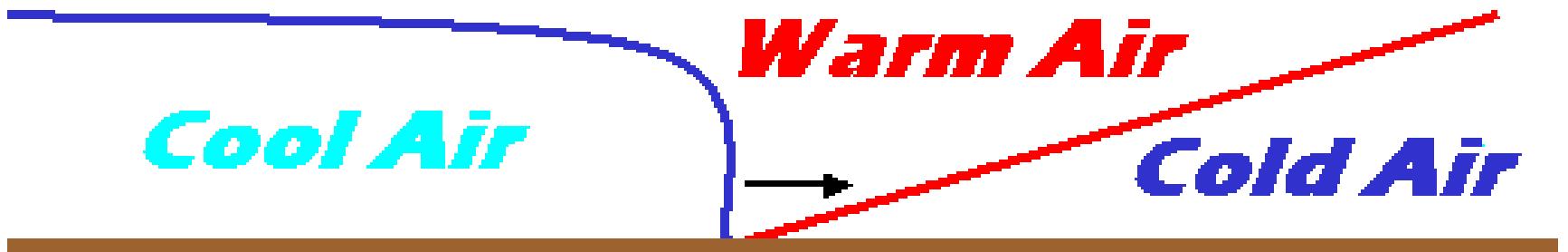
Vertical and Horizontal Depiction of Warm Occlusion



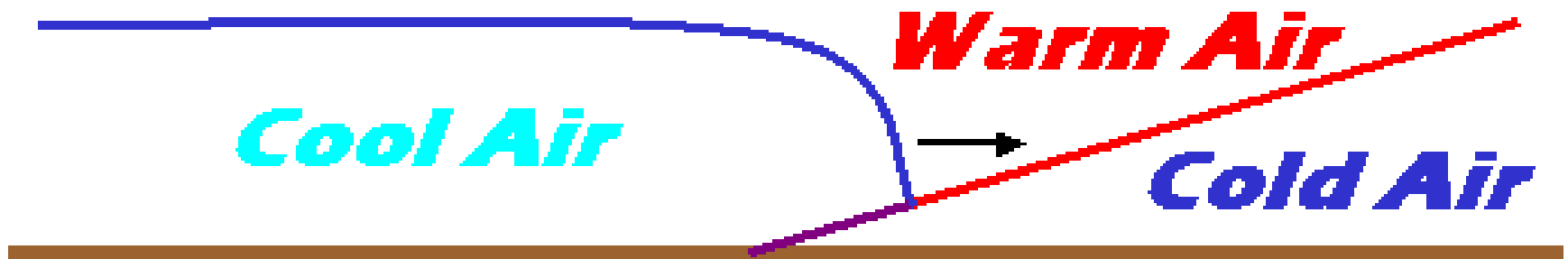
Warm Occlusion



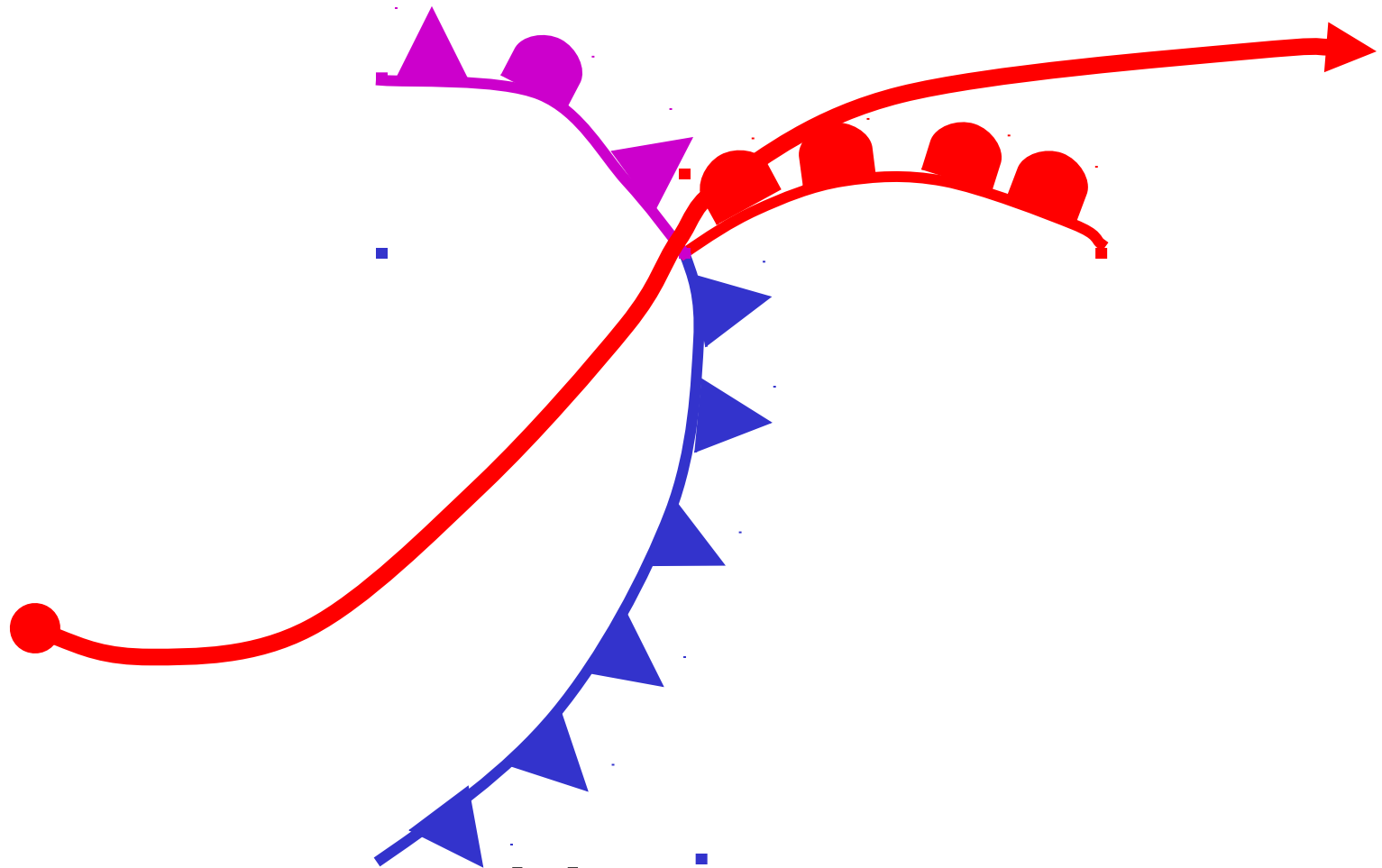
Warm Occlusion



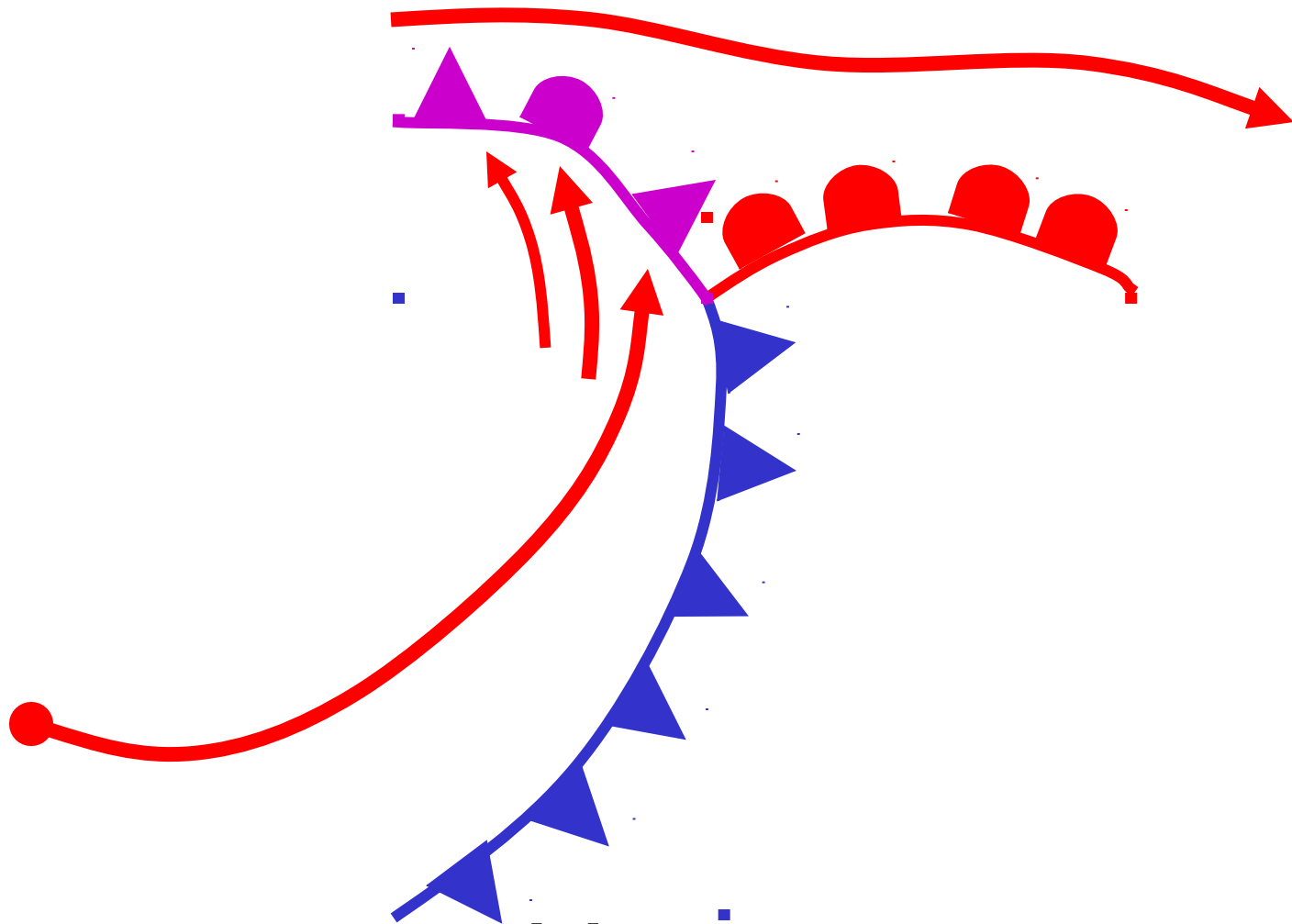
Warm Occlusion



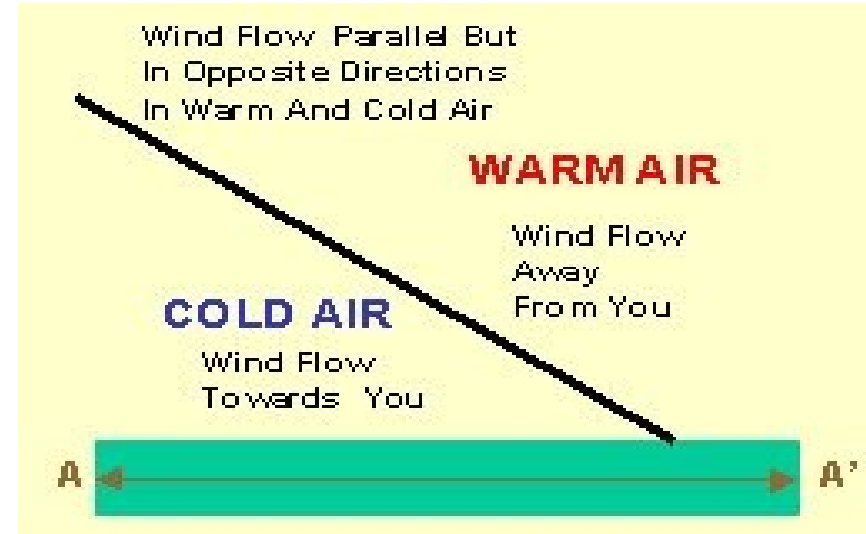
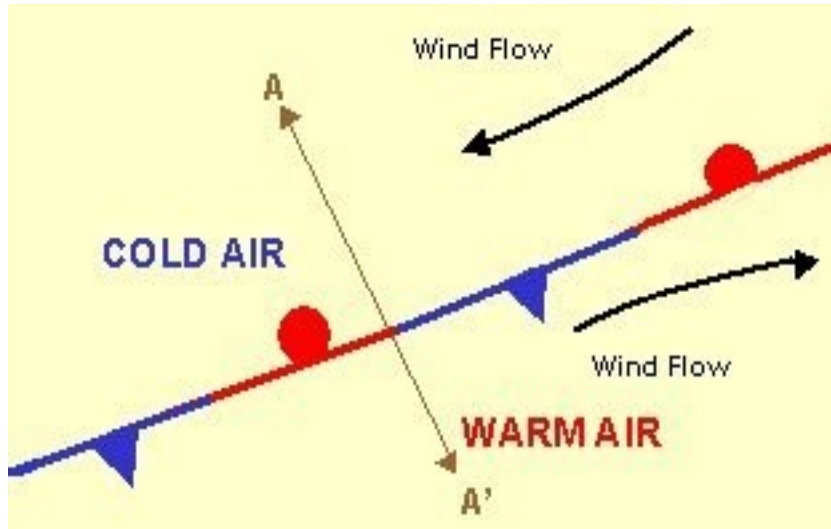
Type A Occlusion



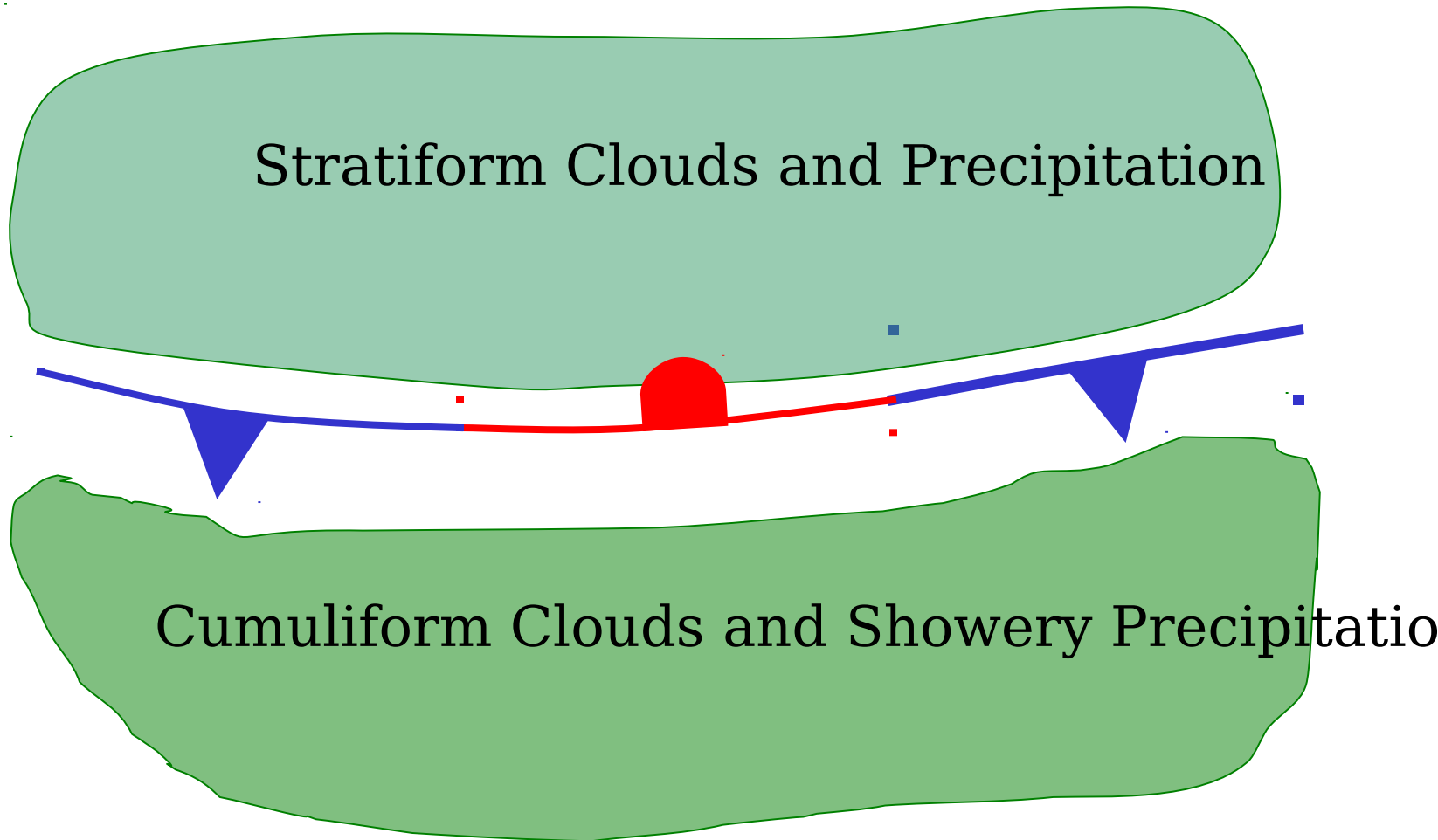
Type B Occlusion



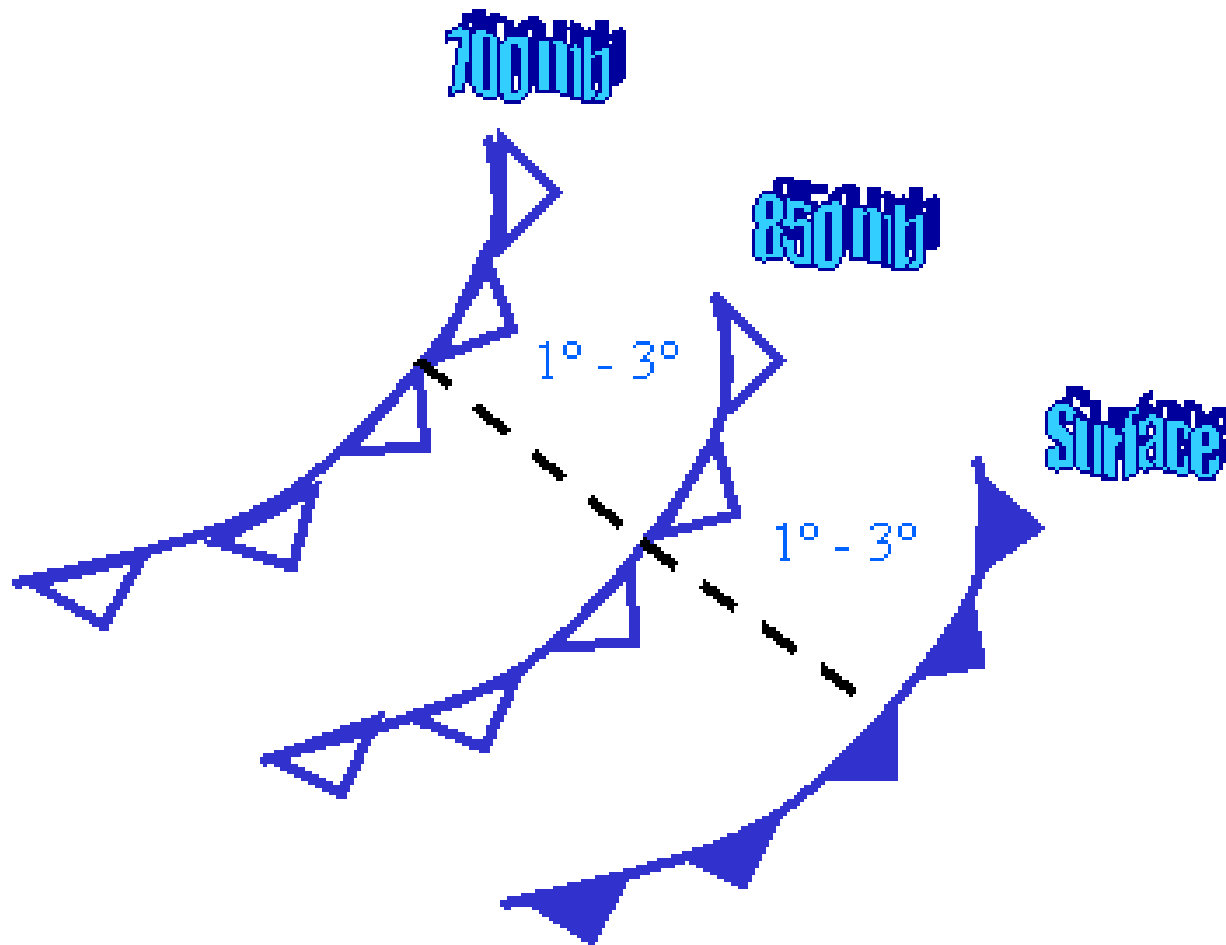
Vertical and Horizontal Depiction of Quasi-Stationary Front



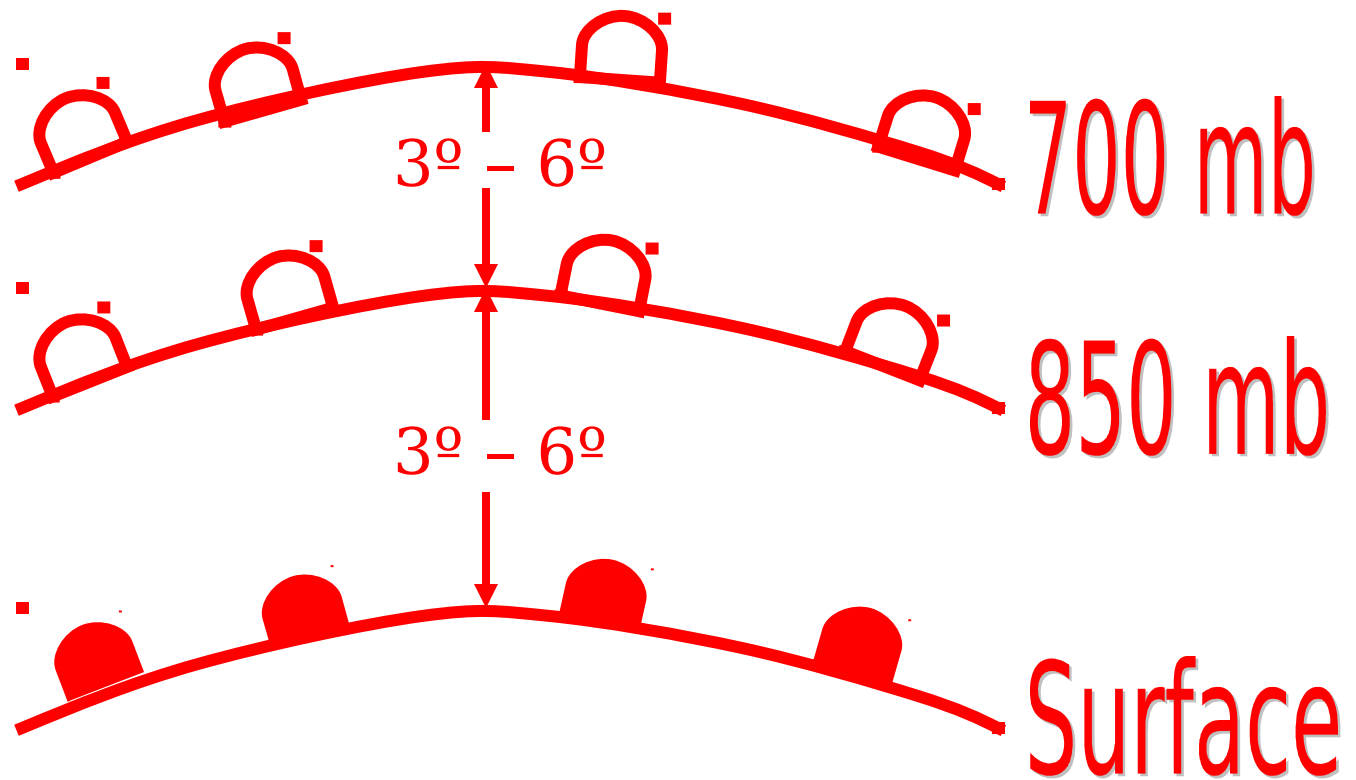
Stationary Fronts



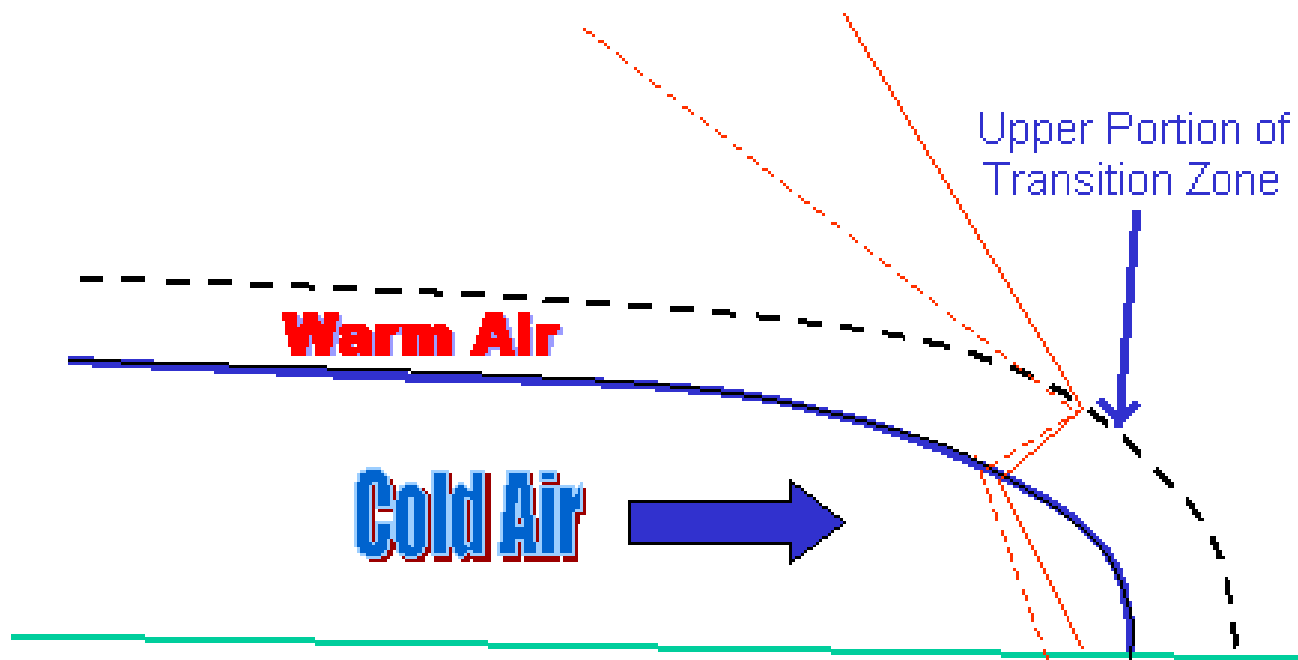
Cold Frontal Stack



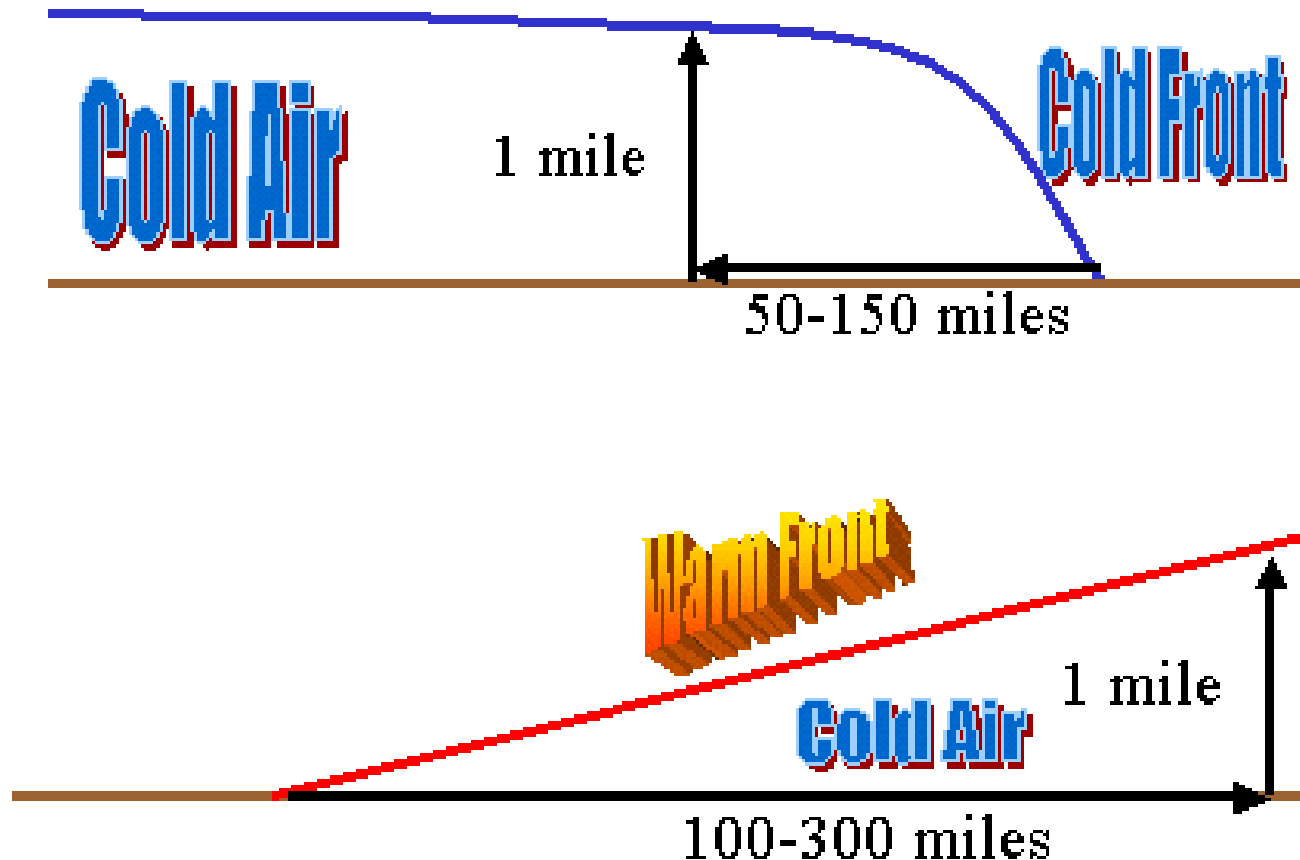
Warm Frontal Stack



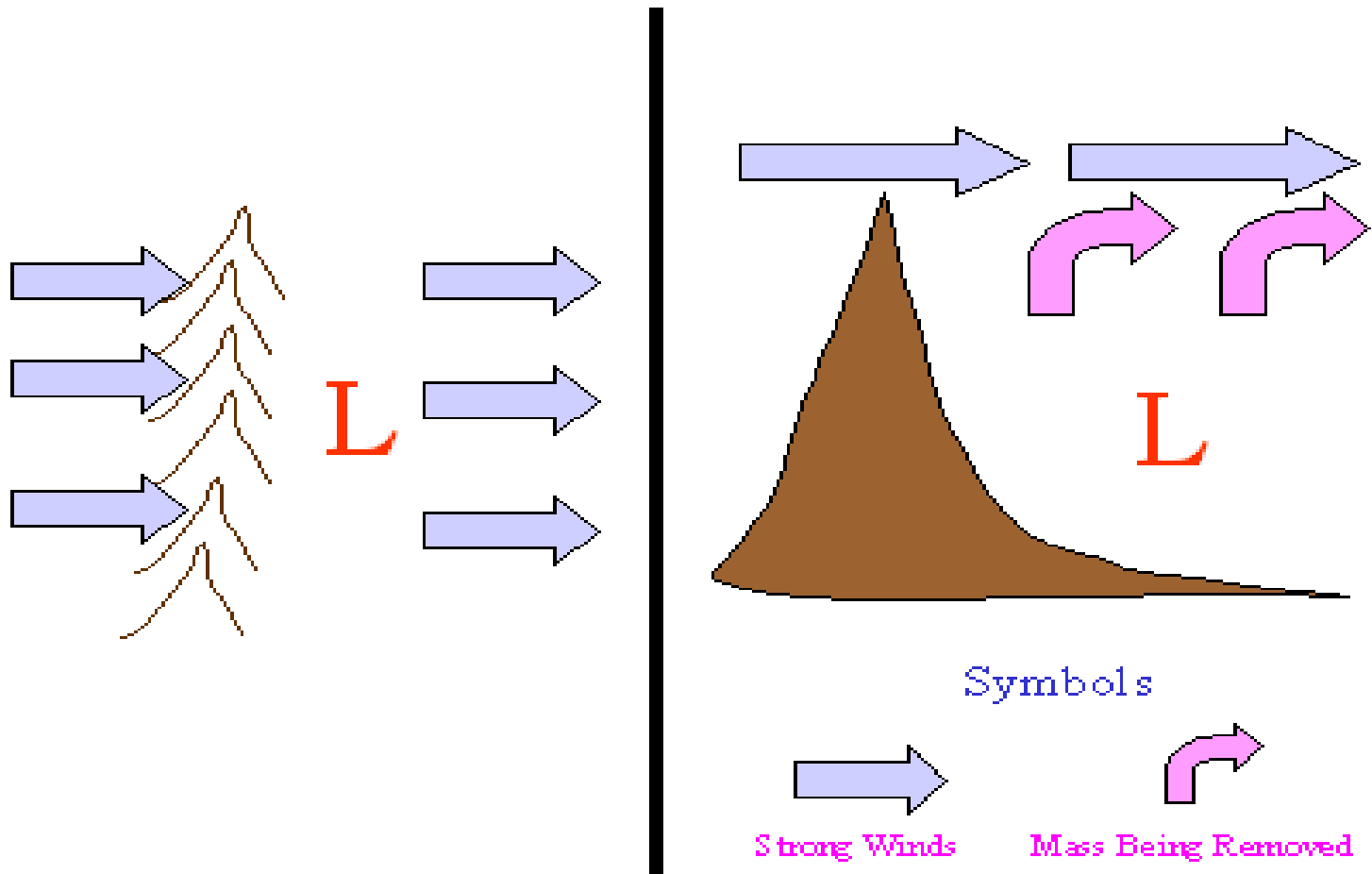
Frontal Inversion



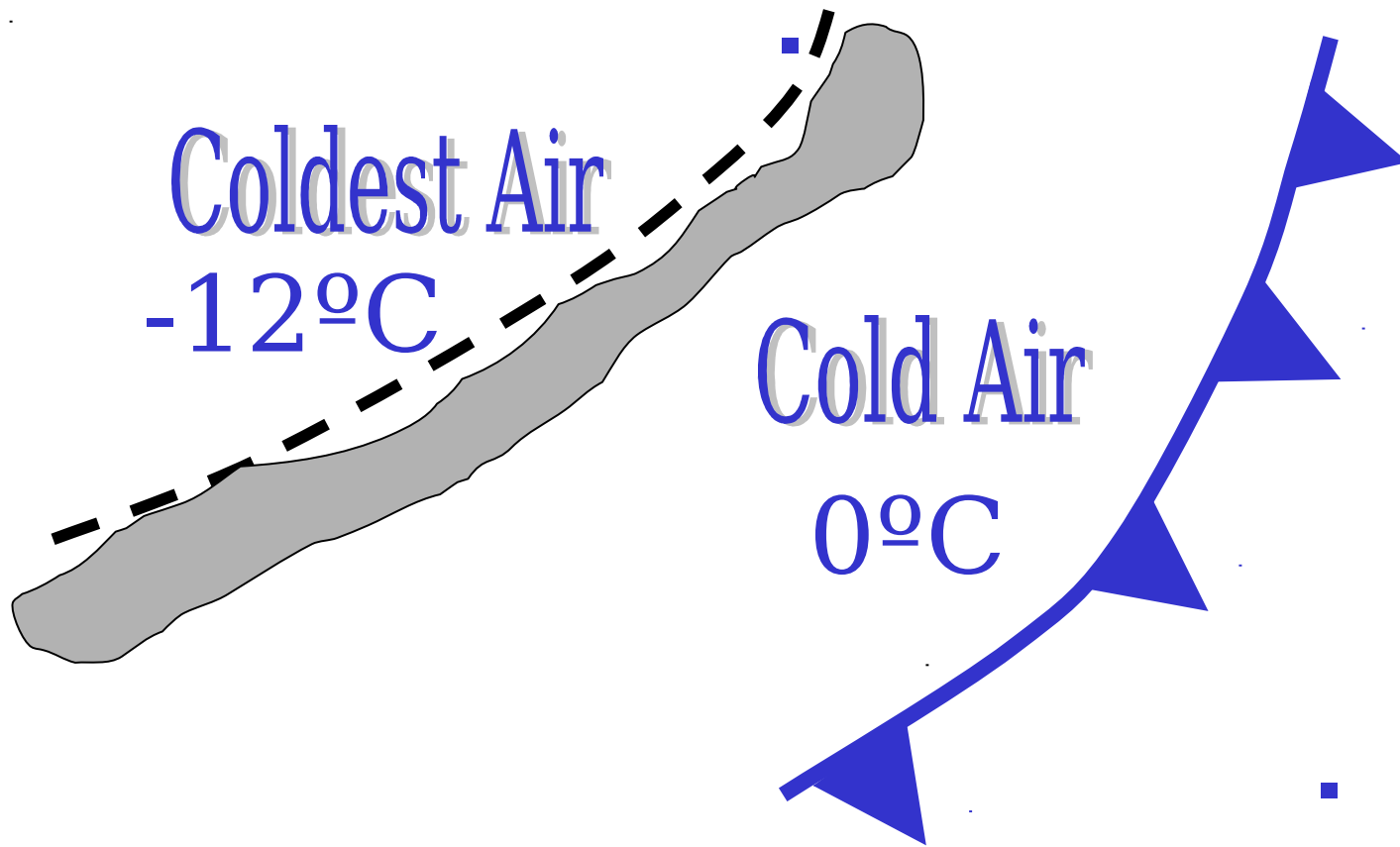
Frontal Slope



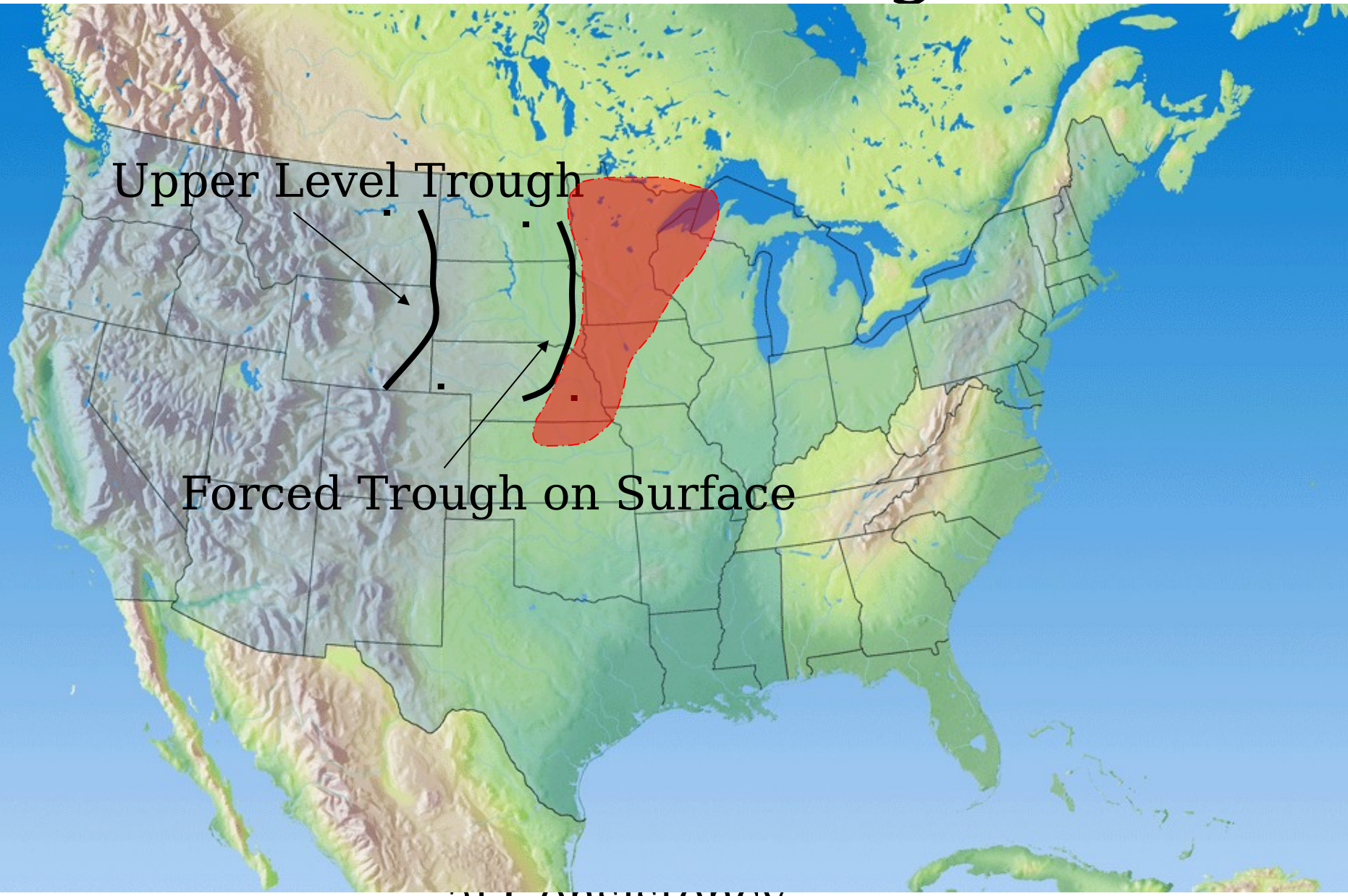
Leeside Trough/Low



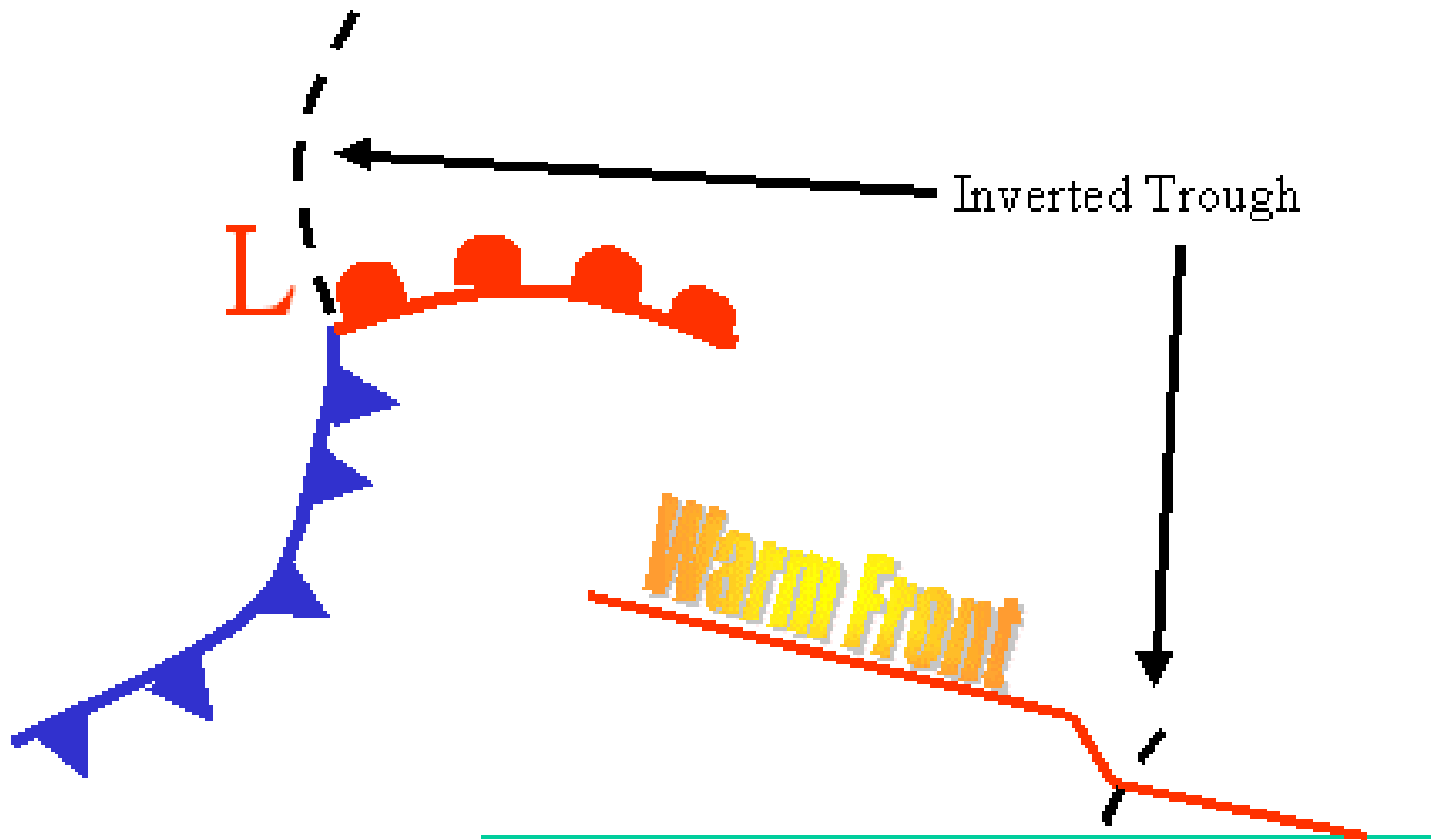
Cold Over Warm Trough



Forced Trough



Inverted Trough



Conclusion

Any Questions?